RESEARCH METHODOLOGY IN SANSKRIT

VI SEMESTER

CORE COURSE: SKT6 B19

B.A. SANSKRIT

(2019 Admission onwards)

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UNIVERSITY OF CALICUT

School of Distance Education,
Calicut University P.O.,
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School of Distance Education

Study Material

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Essential reading

Methodology in Indocogical Research by Dr.

M. Srimannarayana Murthi, Bharatiya Vidya Prakashan, Delhi.

MLA Hand book for Writers of Research Papers , Joseph Gibaldi, EWp, Affiliated East West Press pvt ltd. New Delhi.

Module –I

What is research - kinds of research- critical study, historical study, manuscript study, comparative study. Etc.

Nature of Research in Sanskrit

Studies of Sanskrit gained new perspective and utility since the introduction of Sanskrit into Europe during the eighteenth century. Till that time Sanskrit was studied by both the Indians and foreigners from the same traditional point of view of ancient Indians. The shift in approach during the 18th century was caused by the general philosophical revolution called 'Enlightenment' in Europe. The literature of every known nation came to be viewed and studied by the Europeans since that time in a pragmatic way strictly confining to empirical facts. Before the age of Enlightenment the Europeans were also led by the traditional thinking of the Christianity and the philosophy of the Graeco-Roman philosophers.

Graeco-Roman and Indian philosophers

Even though the Graeco-Roman and Indian traditions have no mutual influences, there are several similarities in their vision of life and thinking. The Greeks and their Roman disciples have discussed politics, economics, sociology, ethics, morals, linguistics, literature and literary criticism as parts of philosophy. The Indians discussed these subjects while dealing with ritual. For them all the discussions were roving round the science of sacrifice in the formof either favourable or adverse criticism. Thus the

ritual in the form of sacrifice became the foundation for all the socio- religious structure of Vedic society. Even the aesthetic experience derived from the literature becomes acceptable only when it could be located in the epistemological and ontological categories of the Vedic religion and mythology. Similarly the Greek philosopher Plato discusses in detail the art of poetry in his philosophical discussions.

Enlightenment Age

During the period of Enlightenment attempts were made to disconnect the empirical matters from the non-factual philosophical speculations. This movement gained strength by the industrial revolution in England, which weakened faith in religion and theology. As a result the social sciences like Economics, Politics, Sociology and Psychology emerged by applying pure reasoning and logic. Several techniques were developed to pursue studies at the empirical level. When Sanskrit was introduced during this time, they were fascinated by the rich literature. They employed some of their techniques to Sanskrit, which promoted studies in Sanskrit from various points of view and preparation of several critical editions. These studies and editions, indeed, became very much helpful to the European rulers to transform the Indian society on the one hand and. to achieve their ends on the other.

Effects of modem approach

The new type of approach to the study of classical languages brought in a rapid change in the social awareness of every nation. The search for human values through the comparative religions on' the one

hand and comparative literatures on the other eave new insights in the thinking of every nation against the traditional concept of winning supremacy of one over the other by muscle strength and military power. Investigations into the human values gave enough evidences for the existence of certain mentality for each nation developed through generations by evolution. These mentalities draw distinctions among different nations. The value attached to any particular social institution could be understood only when viewed from the total mentality of the nation.

National characteristics of Indians

We may, for illustration, enlist certain characteristic features of the Indian nation: (1) Indian civilization has its roots in an ancient heritage, (2) The realm of nature and the realm of man are hardly distinguished, (3) Thought is wrapped in imagination, (4) Logical reasoning is blended with irrational tendencies and mysticism,

(5) The men of wisdom have a bent of mind for speculation and transcendental experience, (6) Every man is concerned with himself, his nature a nd destiny, (7) The civilization is characterized by the unity in diversity, by homogeneity in utmost variety and complexity, by a multitude of language

(8) There are enormous differences in religion and social customs beliefs and practices. They vary from region to region, from place to place and from class to class. (9) The view of life is characterized by (a) the belief in a fundamental principle (say brahman), (b) the recognition of a pristine body of religious literature as an absolute

authority (c) a craving for a firm foundation on which to build one's life and ideas (d) the acceptance of the doctrine of rebirth and transmigration, and (e) the conviction that man's best endeavour should be directed towards escaping from impermanence or final liberation (moksa), and (10) A complex 'polytheism' subsumed in a fumdamental monotheism.

Utility of Research in Sanskrit

Why we should know about the past of a country by unravelling many confusing facts is a basic question posed against the studies in classical languages like Sanskrit, Greek and Latin. It is neither an entertaining recreation nor a leisure time curiosity. It offers an opportunity of a unique intellectual experience of high educational value. This understanding can enrich a man's life by deeper insights into his own behaviour. Even the nations look for the past, for the nationalism is an outcome of the past which is reflected in the form of classical literature, folklore, traditions, common beliefs, experiences and aspirations. Not only individuals but also states and nations cherish to identify themselves in terms of their origin. The whole of the present is the result of the whole of the past is a strong belief held by men of all times and nations. The present becomes meaningful when it is to bear upon the past. Thus to link the present closely with the past and to explore the past with only the present in mind become most purposive research. The cultural change is the aim of every nation for the benefit of its people.

What is Culture?

Culture is the mode of life of a given nation or of a group or of an individual formed by blending the materialistic values and the mentality of the people. The materialistic growth brought by the industrial, scientific and technological advancement cannot by itself lead to happiness. It should go hand in glove with the mentality of the people. The mentality of the people is not a sudden reaction to a given situation, but it is a mode of life ingrained into the community through generations. Any change in the mentality may occur through evolution but not by revolution. Revolution may bring political change or transfer of power, but the mentality of the people do continue. For the same reason the Indian mentality characterised as above, continued through generations, in spite of continuous foreign inroads. But a social change to achieve higher material growth can be envisaged so long as it does not interfere with the mentality of the people. Exactly for this reason the past of the nation is to be known.

Need for Sanskrit

The sources of knowing the culture of any nation are 1) the behaviour of the natives, (2) traditions and customs (3) archaeological and epigraphical evidences and (4) language and literature. The behaviour of the natives is directly verifiable and hence becomes the essential source at the starting point of the inquiry. But it does not focus any thing on the past. The traditions and customs change from time to time and place to place because of socio-economic reasons and environment. They speak of history only when they are related with

other sources of culture. The archaeological an epigraphical evidences are unfailing sources of culture, but they cannot foreshadow anything beyond their date. For example we have no clear inscriptional evidence dating back to third century

B.C. The archaeological survivals in the Harappa and Mohenjodaro excavations still pose serious problems regarding their origin. The language and literature is the only source to know of any nation when the others fail. The Vedic literature is very ancient and the Rgveda, the earliest known text of the Indians, is dating back to about 2000 B.C. From this we have continuous and uninterrupted literature. Most of it, particularly on sciences, religion and philosophy, is available in Sanskrit. Without a thorough knowledge of Sanskrit any real success cannot be hoped in breaking down the knots in the cultural history of India. Further the intellectual achievements of the nation can directly be known through Sanskrit because of the simple reason that language is the direct reflection of the mentality of its speakers. The large number of studies on Indian culture made on the basis of Sanskrit literature during the last and present centuries speaks of the value of Sanskrit. Still there remains much to be done to fill in gaps in the historical development. Many problems still remain unsolved for want of adequate evidences and many issues are yet to be historically structured. Any convincing solution could be possible only by promoting research in Sanskrit.

Scope of Research in Sanskrit

The research in Sanskrit consists of two levels. The first level is the preparation of critical editions of unpublished or improperly edited texts, and the second the cultural studies, which areto be carried out systematically by applying certain techniques and norms.

Critical editions

Books written by various authors of different periods are the primary carriers of materials for research. The availability of the maximum number of facts drawn from these books increases the validity of conclusions. Many of the books written in India still remain in the form of manuscripts without being published. A good number of them were irrecoverably lost by ravages of time and many manuscripts in the private collections still remain unknown to the scholarly world. Their value in building up the cultural history is incalculable, even if many of them may not be of any direct and immediate use. Gaps in the evolution of several traditions, practices, customs, religious faiths can be filled in by making available all the books to needy scholars. The conjectures made on the available scanty facts can be confirmed or made probable or rejected with these works. This makes possible one day to rewrite history of India exclusively on the basis of literary evidences. Preparing critical editions of books has been recognized as an active research activity deserving for the award of a research degree. But the editions are to be made according to the accepted norms and standards of textual criticism.

CULTURAL STUDIES

Any topic of research becomes a cultural study when it is related to the applied fields of specialization like literary criticism, sociology, economics, ethics and morals, law, astronomy and astrology, physical and natural sciences, linguistics, psychology, religion and philosophy and area studies. The successes and failures, the vices and virtues of the social life of a nation, society or group of individuals can be projected and illustrated. Further the topic of research should be in such a way that the results arrived at, on successful completion of the programme, have some relevancy to the present day. In other words they should necessarily bear some consequent application in the social, political, ethical, philosophical, cultural and scientific progress of the nation. For example a sociological study should help to promote (1) awareness of the multidimensional roles played by men and women in society, (2) the process of social, technological and environmental changes, (3) pursuit of human rights, (4) investigations into the causes of disparities, and (5) employment of all classes of people to effective participation in all areas of social development. Therefore, ne who is interested in the sociological aspect of our nation may examine any of the following aspects:

1. Social Background: Education, occupations, supernatural beliefs, preconceptions, biases and beliefs, loss of social status in face of the growing power of organized groups, religion and philosophy.

2. Social evils, crime and punishment: Inadequate and costly city utilities, vanity, general corruption, corrupt bosses inefficiency, prostitution, lawless liquor

trade, abatement of crime, juvenile delinquency, exploitation of labour, imbalanced tax system.

3. Politics and state: Political devices, protection of the general public and the individual from each other.

4. Health: Disease, creation of parks, playground and efficient social services, pure food habits.

5. Civic amenities: Decent, healthy and enjoyable places to live in, efficient social services.

6. Women: Birth of a daughter, education, marriage, dowry system, bride price, polygamy, polyandry and remarriage, sex morality, female slaves and servants, inheritance, religious life, role in religious practices, domestic life, ill treatment, protection laws both at home and at work.

Likewise an area study also is anothersubject of interest for which materials are plenty. Because of political reasons, the religions in India are often characterized by distinct economic peculiarities and sometimes by social and ideological peculiarities. The value of studying various movements within India is significant and fruitful. The study of social groups and classes emphasizes their feelings, aspirations and frustrations.

The techniques to be employed for the study of each topic differ in details depending upon the availability of sources and the imagination of the researcher. The methodologies of research discussed in the following pages are to acquaint the beginner of the different trends and to givesome general guidelines to begin with theresearch.

HISTORICAL METHOD

The word history is from the Greek word historia which originally meant learning by inquiry, research, exploration or information. Later it took on the connotative sense of the results of research, a verbal or written account. Now it is used in English in different shades of meaning like

(1) a narrative of incidents which may be either true or imaginary, (2) a written record consisting of narratives arranged in order of time relating to the past events of a country, people, individual, etc.,

(3) the accounts given of that past based on certain modes of investigation, and (4) the branch of knowledge dealing with past events. We are here concerned mainly with the history used in the second and third senses. The difference between the second and the third senses is very significant; while the intuitive tendencies are more in the second, critical approach is aimed at in the third. Several techniques of investigation were developed for the study and description of tire past happenings. The discipline is called historical methodology or historiography.

Aim of the historical method

The historical method is evolved to know the past as much as we can of the people or the nations, as accurately and precisely as possible we can. This historical knowledge provides a connected, coherent and intelligible form of knowledge about the past by which the social structure in its entirety can be explained. Further one will be able to recapture the mentality and atmosphere of even remote times. This

method further aims at to link the present closely with the past. Thus one has to explore the past with only present in mind. Then the inquiry is for the benefit of the present. For example the utility of the historical understanding of the past incalculable in wars and dangers. Similarly it is needed to plan is for the development of several sociopolitical institutions like parliament, the growth of religious tolerance, etc.

Requisites of a researcher

It requires great imaginative effort to understand the thinking and behaviour of men of remote past, for the changes and their consequences occurred through centuries are to be properly analyzed. The researcher should be able to distinguish between legends about 'what happened' and 'what really happened'. In the same way the traditional beliefs and superstitions are to be kept away, because the historical method demands fundamental changes in interpretation and understanding. Similarly providence, the hand of God, divine purpose and so on do not find place in the investigation. Bias is a natural enemy for correct perspective. Nationalism and patriotism which are brought in a person by his social environment and upbringing effect the attitude of the researcher leading to intellectual distortion.

Free thinking is an essential requisite for the researcher. Similarly no attempt should be made to moralize the account. He must be able to have a continued intellectual questioning. He must also be ready to challenge even the best established convention if he has adequate facts to support his stand. Thus the aim of the researcher is (1) to eliminate the haphazard and

slipshod form of historical learning, (2) to destroy inaccuracy and error, and (3) to formulate accurate accounts on the basis of proven and verifiable facts. To achieve these ends the researcher has to follow certain procedures.

Procedures of the historical methodology

The formulation of a theme and working hypothesis is the first task of the researcher, on the basis of which he collects all the probable facts in the light of existing knowledge. The researcher has to go on searching for further sources of information in order to supplement what he had already. By this he will be able to fill in gaps or to verify the validity of those suppositions already arrived at. The hypothesis may have to be modified or restated or abandoned in favour of another on the basis of the interpretation and explanation of facts. Interpretation of facts means arranging them into a narrative, emphasizing sequence in time. It gives us a straight political, constitutional, diplomatic and cultural history. Explanation of facts means identification of the relation of cause and effect of the consequences. It supplies interconnection with other contemporary happenings to know how a situation arose.

Fact is anything that exists or has happened. The fact must be distinguished from the truth. Truth is a statement or proposition concluded on the basis of facts. The truth may be objective or probable. The objective truth is that which is concluded on corroborative facts. A probable truth is that which is surmised or inferred without corroborative facts. The facts again do not speak themselves. They speak only

when right questions are asked. The skill of the researcher in arranging the incoherent pieces of facts decides the outcome of the investigation.

The historical truth is always liable for change depending upon the facts that are brought for consideration. Therefore the researcher has to strive hard to collect all facts, whatsoever trivial they may be, which can be used as evidences. The sources of facts are literary compositions, diplomatic and donative inscriptions engraved on stone or copper plates or written on palm-leaf and paper. The researcher must be able to use his commonsense to determine who produced a document, when and why he produced it, what has been its fate since it was produced and the mutual relationship of the documents. This investigation is essential because the facts that are collected may be real or fictitious by forgeries. So the researcher has to use his discrimination to identify the genuine records and discard all those which are spurious and doubtful. Therefore not being led away by the face value of the document, it is to be decided whether a given document deserves to be used as a source. He must consider the most that can be said for and against any hypothesis and relative weight of evidence on either side before drawing conclusions of the truth. The history of any social institution is concerned with change. The researcher has to analyze situations and explore their sequence and causes for the change of one into the other. He must find out everything that could be responsible for the change by examining everything that could be identified. Therefore, in view of the complexity of human behaviour, it is always advisable to take up specialized

studies relating to a particular period, or particular sources or topics.

Illustration

Let us illustrate with one problem, which still remains fully unsolved, regarding the origin of the founders of the Vijayanagara empire and the capital Vijayanagara or Vidyanagara. There are two groups of scholars holding different views regarding their origin. While some scholars like R.Sewell1, K.A.Neelakanta Sastri, N. Venkataramanayya, V.A. Smith, and A.K. Warder hold that Harihara and Bukka were of Telugu origin and founded the capital and the empire in A.D. 1336, others like H.Heras, B.A. Salatore, S. Krishnaswami Aiyangar, Vasundhara Filliozat, and Hermann Kulke hold that they were of Karnataka origin and the kingdom was in continuation of the Hoysaia dynasty. Both the theories were developed on the basis of certain facts collected from literary and epigraphica, evidences, which are mutually denounced by the rival groups.

Some of the points held by the theorists of Andhra origin are as follows:

1. There are inscriptions which date the foundation of Vijayanagara in the years A.D. 1336. There are also some copper plates which refer to the capital as Vidyanagara. There is one autobiography known as Vidyaranyakdlajmna composed by Vidyaranya himself, which describes the events synchronizing with those mentioned in the inscriptions. There is also another literary workVidyaranyavrttanta, which gives the biography of Vidyaranya.

2. On the basis of the above evidences it is held that Harihara and Bukka served at Warangal in the court of Prataparudra and fled to Kampili when Warangal was conquered by the future Delhi Sultan Muhammad Tughluq in 1323. When Kampili also fell in 1327 in the hands of the soldiers of the Delhi Sultan Muhammad Tughluq, they were taken as prisoners of war to Delhi, where they were converted to Islam. They were sent back to Kampili by the Delhi Sultan to rule over the area on his behalf.

3. Returning to Kampili they took the lead of the spiritual leader Vidyaranya, under whose guidance they reverted to Hinduism, proclaimed independence and founded a new city. Vidyaranya had a pivotal role in the foundation of Vijayanagara. The city was also named Vidyanagara commemorating the role of Vidyaranya in the establishment of the kingdom.

4. Harihara celebrated his coronation in Hindu style on 18th April 1336. Now the brothers overran and annexed the neighbouring kingdom of Hoysalas. They took over the whole territory after the death of the Hoysala king Ballala III.

5. To commemora te their success over the Hoysala s, Harihara, Bukka and other members of the Sangama family met at Sringeri and celebrated a 'victory festival' vijayotsava. This vijayotsava took place in the year 1346, the same year in whichBallala IV died.

Some of the points held by the exponents of the theory of Karnataka origin are as follows:

1. The evidences shown for Andhra origin are inadequate. The inscriptions mentioning thedateoi Vijayanagara and Vidyanagara for Vijayanagara are spurious. They were fabricated at Sringeri in the_16t_h century under its mahant and jagadguru Ramacandra Bharatf (1508-1560). The traditional accounts are not reliable and they do not date back to the 14th century. The so called autobiography Vidyaranyakdlajnana is not older than A.D. 1580. Thus the history is to be builton the basis of other inscriptions and literary evidences only.

2. Harihara and Bukka were of indigenous origin and former feudatory chiefs of the last Hoysala kings Ballala III and Ballala IV. They were in charge of defending the northern frontiers. Thus there is no truth in the conversion to Islam and reversion to Hinduism of Harihara and Bukka.

3. Vidyaranya had no role to play during the early years of the struggle of Harihara and Bukka for dominance over the south. Even if there were any influence of Vidyaranya, it was very insignificant. The city Vijayanagara was already in existence. It was founded by Ballala III and known variously as Hosapattana, Virupaksapattana and Vijayavirupaksapura. It came to be known by the present name Vijayanagara since A.D. 1357.

4. Harihara was not coronated in 1336, as the inscription which mentions this date is spurious. Harihara held the typical title of mahdmandalesvara 'Great Tributary Lord' and thus maintained his loyalty to his former sovereign of the Hoysala dynasty. It was

Bukka who bore the title maharajadh i raja -pa ram esva ra 'the Chief king of the great kings; the Most Excellent Lord' in 1468. Harihara and Bukka, did not, indeed, overrun the Hoysala dynasty. They maintained cordial relationship with them. When the sovereignty of the Hoysala family became weak because of other political reasons they took opportunity to establish a kingdom of their own.They had all support and encouragement from the Hoysala family.

5. The vijayotsava was held at Sringeri in 1346 by the members of the Sangama family in order to solemnize the authority of Harihara and Bukka to carry on the work of the Hoysalas and to defend the Hindus on the South. Thus Kikkayitai, the dowager queen of the late Ballala III participated in this function and also donated land to the sage Bharatitirtha of Sringeri. The Vijayanagara kingdom was officially founded in A.D. 1347.

The exponents of both the theories have no difference of opinion regarding the development of the Vijayanagara kingdom after A.D. 1347. Regarding the historical situation between A.D. 1336 and 1346 no precise conclusion could be arrived at so far. Further researches are being conducted and books are also being published advocating either of the theories. For example while a book entitled Vijayamgara-City and Empire-New Currents of Research edited by Anna Libera Dallapiccola was published in 1985 in favour of the Karnataka theory, M. Kripacharyulu published in 1986 a monograph Sayana and Mddhava-Vidyaranya in support of the Andhra origin.

The above illustration shows how the issues get complicated for want of precise and definite evidences on the one hand, and how difficult it would be on the other to decide the authenticity of any evidence even if collected. But a genuine researcher has to proceed without any prejudice in his pursuit of search for truth on the basis offacts.

MANUSCRIPTS STUDY

The main sources of our knowledge of ancient Indian culture and history are manuscripts, epigraphs, coins, architecture, sculpture and painting. A proper recognition of the value of these sources is equally important for a devoted study. Each of the sources provide a counter check to eliminate obscure episodes, confirm known events, correct wrong concepts or identifications, brighten up blurred points, flood unfocussed'aspects, and produce finally a clear and authentic narration. The sanskritist is pre- eminently concerned with manuscripts. The information collected from the manuscripts forms the basic material for further research based on other sources like epigraphs. To produce a critical, authentic and purposive research document, the sanskritist has to know the nature and value of manuscripts, the scripts and materials used therein.

Every work that has been discovered andidentified is of great value; for, the publication of which may likely revolutionize the whole existing concept on a particular topic and add new dimensions to interpretation. For example the dicovery of Kautilya's Arthasaslra, Bhasa's plays, Bharata's Natyasastra, Bhoja's Srhgaraprakdsa,

Vijjika's Kaumudmahotsava, Bhartrhari's Mahabhasyatikd and Vdkyapadfya, etc., have contributed to the understanding of the cultural history of our country. There are many more works in different branches of knowledge belonging to different periods of history, still in the form of manuscripts. The existence of several works known through references is yet to be determined. Thus every ancient work, however insignificant it may be from the point of view of content and treatment, needs the attention of the Sanskrit scholars.

Writing in India: There are no clear evidences to determine precisely the beginnings Of the script and art of writing in ancient India. The earliest specimens of writing in the form of seals is found in the Indus Valley excavations; but this script is not properly deciphered till today. The literary references in the Vedic as well as the Buddhist and Jain literatures confirm to the existence of the art of writing in India from very ancient times. But we do not have any deciphered specimens of writing going back to such an antiquity. The royal edicts of the Mauryan Emperor Asoka (272-236 B.C.) are the earliest precisely datable records so far discovered and deciphered. There are some records and coins assigned to pre- Asoka period, namely fourth and fifth centuries B.C., but scholars are not unanimous regarding the dates of these records. Thus the Asoka inscriptions form the starting point for the scientific study of the art of writing and evolution of scripts.

The Asoka inscriptions are available in two distinct scripts, namely the Brahmi and the Kharosthi. Excluding two inscriptions in the Kharosthi fall the rest

of Asoka inscriptions are in the Brahmi script. On epigraphic grounds it is supposed that the Brahmi script should have existed in the sixth century B.C. It is because, even in the days of Asoka there were several varieties of the Brahmi script. Another special feature of the Asoka inscriptions is that all of them were in Prakrit. The early inscriptions which followed those of Asoka were also in Prakrit. So the scholars are of the opinion that the Brahmi script was designed for the Prakrit language. But in later times this script was used to write inscriptions in Sanskrit also. Furthermore the Brahmi script became popular all over the country and the Kharosthi script was practically ousted out of use. There are very few specimens like the Kharosthi Dhammapada (also called Prakrta Dhammapada) consisting of fragments of birch-bark dating circa first century A.D., besides the two Asoka inscriptions written in the Kharosthi at Shahbazgarhi (nine miles from Mardan, Peshawar District) and Mansehra (Hazara district) in Pakistan. All the scripts used in writing manuscripts in India are derived from the Brahmi script with some alterations and developments in the ligatures and curves. Today we find the Sanskrit manuscripts written in (1) Sarada, (2) Devanagari, (3) Nandinagari, (4) Nepali, (5) Bengali, (6) Maithili, (7) Oriya, (8) Grantha, (9) Malayalam, (10) Telugu and (11) Kannada.

Development of Scripts From the Brahmi

Brahmi (c. 600 B.C.)

Northern Brahmi alphabet, 5th cent. B.C.)

Southern Brahmi (Gupta (Dra'vidi) 5th cent. B.C.)

Western Gupta alphabet

Eastern Gupta alphabet

(l)Sarada

(A.D. 800)

Nagari

(7th cent.)

Nagari

(2) Devanagari (Northern Nagari) (8th cent.)

Proto-Southern Nagari

Southern Nagari (13-16th cent.)

(3)Nandinagari

Proto-Eastem Nagari

(4) Nepali (11th cent.)

Proto-Bengali (11th cent.)

(5) Bengali (6) Maithili (7) Oriya

Southern Brahmi(*from first division)*

Kannada-Telugu script (Verigi script, 4th cent. A.D.)

Proto-Grantha (7th cent.)

Proto-Telugu (10th cent.)

Proto-Kannada (10th cent.)

Proto-Grantha → (8) Grantha, (9) Malayalam

Proto-Telugu → 10) Telugu (15th cent.)

Proto-Kannada → (11) Kannada (15th cent.

The Brahmi script got separated into the Northern

Brahmi and the Southern Brahmi by about fifth century B.C. The Northern Brahmi alphabet of the fourth and fifth centuries B.C., commonly called the Gupta alphabet continued with several deviations upto the end of the fifth century A.D. The Bower MS of the fifth centuryA.D. was written in this Gupta alphabet. It has split into the western and the eastern varieties. The western variety of the Gupta alphabet is represented by the Bilsad Prasasti of

A.D. 415, while the eastern variety is represented by Harisena's Allahabad Prasasti (between A.D. 370 and 390). The western Gupta alphabet gave birth to the Sarada script by about A.D. 800 and it appears in Kashmir and in the north-eastern Panjab. Buehler opines that the Bakhshali MS found in the Yusufzai district in Kashmir was the earliest specimen of Sarada script belonging to the eighth century.

The eastern Gupta alphabet developed into Nagari by about seventh century. This gave again rise by about eighth century to three varieties called by names the Northern Nagari, the Proto- Southern Nagari and the Proto-Eastern Nagari. The Northern Nagari, also called

Devanagari, got developed and extensively used in the northern and central India from eighth century as a distinct variety. The copper plate of the Maharaja Vinayakapala of Mahodaya, probably of A.D. 794, is the earliest specimen of this script.1 This script became so popular after A.D. 950 that it was used in the whole of North India. For example a number of manuscripts from Nepal belonging to the eleventh and twelfth centuries show the Northern Nagari.

Corresponding to the northern sister, a Proto-Southern Nagari developed during the same period of eighth to eleventh centuries. It developed during the thirteenth to sixteenth centuries and was used in the inscriptions of the Vijayanagara Empire. 11 still survives in the Balbodh or Devanagari of the Maratha districts. This has produced in the Karnataka region another variety called Nandinaganj which is still used for writing manuscripts in Karnataka.

Towards the end of the eleventh century the Proto-Eastern Nagari underwent further changes in Eastern India resulting in two scripts, Nepali and Proto-Bengali. The Cambridge manuscript No. 1691 of A.D. 1179 is the best specimen of the Nepali. The Nepali script is preserved in Nepal and Tibet. The Proto-Bengali and Nepali are closely connected and bear several similarities. For example the British Museum manuscript: Oriental No. 1439 of A.D. 1286 written in Nepali shows the Bengali influence. The Cambridge manuscripts No. 1699, 1, 2 of A.D. 1198-99 are the specimens of the Proto-Bengali. From the Proto-Bengalf arederived the Bengali) Maithili and Oriya. While the Bengali is used in Bengal, the Maithili is

used in Northern Bihar and Oriya in Orissa. These three again bear very dose similarities in the ligatures and curves of the alphabet.

Southern Brahmi

The history of South Indian palaeography and manuscriptology beset with obscurity for want of continuous records. In the first is place, as evidenced by several literary records, the palm-leafis the chief writing material at least from the time of Buddhism. But unfortunately no manuscript of antiquity, as in the case of some north Indian manuscripts, came to the notice of researchers. Burnell opines that a Kannada manuscript he identified to be belonging to A.D. 1428 is the oldest palm-leaf in South India. No autograph of any author belonging to the medieval period could be located in any manuscript collection upto date. Therefore we are left with only inscriptions for the historical account of the South Indian Brahmi. This Southern Brahmi is called Dravida-lipi in the Buddhist work Lalitavistara and Damili, a Prakrit form of the Sanskrit Dravida in the Jaina works the Pannavanasutra, Samavayangasutra and Bhagavati sutra. The Bhattiprolu (near Amaravati in the Krishna District of Andhra Pradesh) relic- casket inscription, assigned a date earlier than that of Asoka inscriptions, is the oldest record of the South Indian script. The precisely datable inscriptions are, in fact, those of Asoka found in South India. The most important are those inscriptions found at Yarragudi in Andhra Pradesh and Jaugada in Orissa.6 Besides these Asoka inscriptions there is not a South Indian inscription, which can be accepted as genuine with a date before the middle of the fourth century A.D. The

earliest inscriptions belong to the dynasties of Early Pallavas (A.D. 350-500), Salankayanas (c.A.D. 350-500), Visnukundis (A.D. 440-616), Vengi Calukyas (A.D. 624-1061) in Andhradesa and Western Gangas (A.D. 400-475), Kadambas (A.D. 345-580), Badami Calukyas (A.D. 543-745) in Karnataka. The script in which these inscriptions were engraved is called Kannada- Telugu script. This name is coined to stand in contradistinction to the name 'Gupta script' for the Northern Brahmi. It is also called Vengi script by some palaeographers. Both the names, namely Kannada-Telugu and Vengi were applied to the Southern Brahmi simply because the copper- plates of the Salankayanas who ruled over the region with Vengi as capital were the earliest South Indian inscriptions known to the European Indologists. This script was in use not only in the Andhra and Karnataka regions, but also in the whole of South India lying south of Vindhyas. All the inscriptions issued by the Pallavas (A.D. 550- 912), who ruled over the Tamil region with Kancipuram as capital, were in this script till A.D. 600. Further this script got also spread over to Indonesia and Malaysia. For example the Modem Javanese (together with its antecedent form Old Javanese) is a derivative of the Kannada-Telugu script.

During the reign of the Pallava ruler Mahendravarman (A.D. 600-630) the Kannada- Telugu script began to take the shape of the Grantha script. As the very name grantha suggests, this script was designed for writing Sanskrit texts and engraving Sanskrit inscriptions in Tamilnadu and Kerala. To meet the local needs, namely for writing in Tamil, Tamil script was developed. This Tamil alphabet was derived from a

different source. It was also found used from the seventh century A.D. Buehler opines that it was derived from a northern alphabet of the fourth and fifth centuries. In course of time it was strongly influenced by the Grantha and thus it agrees in part with the Grantha in some letters. The Grantha script survivesin the Modern Grantha and its variety Malayalam. The oldest Grantha manuscript, as identified by Burnell, is of A.D. 1600.8 This is No. 9594 of the Tanjore Saraswati Mahal Library.

By tenth century the Telugu-Kannada script got divided into Proto-Telugu and Proto-Kannada scripts. For about two to three centuries these scripts underwent modifications. The Proto-Telugu and the Proto-Kannada scripts got specific shapes into Telugu and Kannada during the fifteenth century and the same scripts are being used upto date without any further significant variations.

ORIGIN OF INDIAN SCRIPTS

The script is a mark of civilization and differentiates its writer from others just as the speech differentiates the man from the animal. As such a curious researcher finding out a variety of scripts, as noticed in the preceding chapter, may raise questions of the following type, with special reference to Sanskrit:

1. When did the art of writing is pressed into use in India?

2. What were the scripts actually existed in our country in ancient times?

3. What was the origin of these scripts?

4. Can there be a common script for the whole nation on the basis of the knowledge of the history of our scripts?

The origin of scripts is in fact one of the unsolved problems in the cultural history of India.

1. Enquiry into the origin of Indian scripts

The question of the origin of Indian alphabet was raised for the first time by Sir William Jones in 1806. It gained importance when the Brahmi inscriptions of Asoka were deciphered by James Prinsep in 1837. Every information that came to light during subsequent investigations gave new impetus and the problem of the origin and development of Indian scripts is being reexamined, every time afresh, till today.

2. Indus Valley script

Excavations at Mohenjodaro in Sindh province and Harappa in West Punjab of Pakistan, Rapur in East Punjab, Lothal inSaurashtra, Kalibangan in Rajasthan of India, and some regions of Beluchistan and East Persia have brought to light the existence of an ancient civilization in the region. This is usually referred to as the 'Indus Valley Civilization' or 'Harappan Civilization'. Many questions as regards to the nativity of these people, origin of their culture, language they spoke and the script they used are still under active consideration. Scholars like Stuart Piggot, H. de Terra, Mortimer Wheeler and Gorden Childe opined that the Indus civilization must have evolved from an indigenous culture.

Some scholars like Sankarananda, B.M. Barua, A.P. Karmarkar and S.R. Rao interpreted that the Aryans themselves have built up the Indus valley culture. There are others like Rev. Fr.

H. Heras and G.R. Hunter who read the people of the Indus Valley Civilization to be Dravidians, who spoke Proto-Tamil language. Still others like D.H. Gordon notice that the Indus Valley people asimmigrants who brought with them a certain knowledge of things and knowhow with which theycould adapt and evolve a new pattern of culture. Most of the scholars have agreed upon one point that this culture could be assigned to 300G B.C.

The Indus Valley Civilization was essentially chalcolithic and was not found used in any stratum in the course of excavations. About 800 beautifully cut seals of steatite have been found with some writing in an indigenous script and many scholars have been trying with no success till today to decipher the writings. Most of the scholars have defined the writing as one of the stylised pictographs. L.A. Waddel connected Indus Valley script with Sumerian and concluded that the inhabitants of Mohenjodaro were Aryans. Langdon connected these signs with the Brahmi script of later times. Similarly Pran Nath, presuming the Indus Valley script to be the source of the Brahmi, gave alphabetic values to a number of signs in the Indus Valley script. The Egyptologist W.M. Flinders Petrie connected the Indus Valley script with the Egyptian ideographic hieroglyphs. The Hittitologist B. Hrozny connected the Indus script with the Hittite hieroglyphic writings, based on the theory that the Indus Valley people were Indo-

Europeans and even Indo- Hittites or Proto-Hittites who reached India before the Rigvedic Aryans. Swami Sankarananda of the Ramakrishna Mission and B.M. Barua opined that the script is based on the Tantra. While Karmarkar opined that the language was Sanskrit, Heras held that it was Proto-Tamil. Many such theories could be added here; but no theory could succeed to decipher the script in total and thus the Indus script remains still as a mystery for the researchers.

The Brahmi, represented by the inscriptions of Asoka, is the earliest script which could properly be deciphered. There are no specimens representing the interval period between the Indus Valley writings and the Asoka inscriptions. The gap could be filled on the basis of the literary evidences presented by the Vedic literature.

3. Art of writing during the Vedic period

There are many references in the Vedic literature alluding to the existence of the art of writing ever since the composition of the Rigveda. For example, RV. 10.62.7 mentions that one king by name Savarni gave away one thousand cows with number eight marked on the ears of each. Panini also confirms the practice of marking a number eight or five on the ears of the cattle. All through the Vedic period we have references to mathematical calculations and cardinal numbers with large denominations. While Ore Taittiriya- samhita mentions a highest number parartha which is equal to 10^{12}(= 10,00,00,00,00,000), the Satapatha-brahmana mentions divisions of time taking into account l/17th second called prana as the lowest unit of measurement.

The variety of metres in the samhitas again confirms the rules of prosody which presupposes a system of writing. The Upanisads mention aksara and varna; both the terms by derivation refer to the written letters. The word aksara refers to that letter which is not destructable (ksara),i.e. permanent. The word varna refers to something which is coloured or painted, referring to the letters which are written on black boards with chalk. Panini (7th cent. B.C.) refers to lipi, lipikara, libi and libikara (Pan. 3.2.21) and yavanani (Pan. 4.1.49). While yavanani is a scriptof the Persians or Greeks, lipi or libi is an indigenous script of writing. Panini mentions more than ten ancient grammatical works in his grammar. Had there not been some written copies of these works, it would not be possible for him to correlate and consolidate the grammatical peculiarities and to formulate his own rules. From the fourth century B.C. onwards we have references of writing in Sanskrit literature, like the Ramayana, Mahabharata, Naradasmrti, Vasistha-Dharmasutra and Arthasastra. The Jaina works Samavayangasutra (c. 300 B.C.) and Pannavanasutra (c. 168 B.C.) and the Buddhist work Lalitavistara give lists of scripts. The Buddhist works like Suttanta, Vinayapitaka, Jatakas and Mahavagga not only confirm the existence of script but also mention writing materials like phalaka 'wooden writing board' and varnaka 'wooden pen'.

This historical account of the Indian art of writing based on literature does not satisfy our requirements because there is no physically varifiable evidence to describe the actual nature of the script and to demonstrate the evolution ofvarious scripts. Thus the inscriptions of Asoka

which record his edicts are the earliest available specimens of Indian scripts and thus with these inscriptions starts the scientific inquiry into the development of scripts. The rock edicts of Asoka are inscribed in two scripts called the Brahmi and the Kharosthi.

4. Decipherment of the Brahmi script

The earliest attempt to decipher the script of the Asoka inscriptions was made in the fourteenth century by Feroz Shah Tughlak when he shifted the Asoka pillars from Topra and Meerut to Delhi. The Moghal Emperor Akbar also attempted to decipher the writing on the Asoka pillars. All these attempts were in vain till the forties of the last century when the western scholars Ch. Lassen and James Prinsep were able to read and interpret them.

5. Name of the script

There is no record in the Vedic literature in which the name brahmi is used as a name for the script. As mentioned earlier, Panini used lipi and libi for the indigenous script. It was in the Buddhist and Jaina literature we come accross brahmi as the name of a script. According to the Chinese translation of Abhidharma-vibhasa-sutra by Huen-Tsang the Brahmi script was invented by a brahmin called Ch'u-p'in-t'o (=Skt. Govinda, i.e. Lord Visnuhimself). According to another Chines translation of Mahdvastu-Avadana (587-591 A.D.), the Brahmi script was given by god Brahma. On epigraphic grounds it is supposed that the Brahmi script came into existence at least by about sixth century B.C.

6. Characteristics of the Brahmi

By the time of Asoka the Brahmi script has several varieties and each Rock Edict of Asoka manifests some peculiarities in ligatures and curves. Some of the common characteristics found in the Brahmi script are:

1. The letters stand upright.

2. They are made of regular lines and loops.

3. The letters hang down (unlike in Kharosti which are top-heavy.

4. Most of the vowel signs are added at the top in the shape of horizontal line.

5. The script is written from left to right.

7. Origin of the Brahmi script

The problem of the origin of the Brahmi script is examined from the point of view of two theories called the indigenous origin theory and the foreign origin theory. The theorists of indigenous origin opine that the script was either borrowed from the Dravidian script or developed by the Aryans themselves. The theorists of foreign origin on the other hand, try to trace the Brahmi to Greek, Assyrian and Semitic sources and allude various reasons for the Indians to borrow from a foreign land.

7.1. Greek origin

James Prirtsep, Otfried Mueller, Emile Senart, Raoul de Rochette, Gobletd Alviella and others are the chief exponents of this theory. James Prinsep holds that there are certain similarities between the Brahmi and the Greek characters. Joseph Halevy opines that the Brahmi was derived from a mixture of the Aramaic, Kharosthi and Greek letters in the last quarter of the fourth century B.C. The presumption of these theories became possible because of the tendency among early European scholars to trace any thing good or great in India to some Greek source. But the chronological evidences do not support either of the theories. Firstly the Brahmi script was widely used in India before the time of Asoka, as we find several variations in the characters of different edicts of Asoka. Secondly the Greeks came into India long after the Indians had acquainted with other people using alphabet. Greek itself was borrowed from the Semitic alphabet.

7.2. Semitic origin

Most of the scholars believing in foreign origin trace the sources of the Brahmi to the Semites. The main arguments in favour of the Semitic origin of the Brahmi script are the following:

(a) There was no specimen of writing before the fifth century B.C. in India.

(b) There are similarities between the Semitic and the Brahmi scripts.

(c) The Brahmi was supposed to have been

written in the direction of right to left and thus paralleled with the Semitic scripts which are uniformly written from right to left.

(d) The early Indian writing was pictographic; no alphabetic writing can be derived from pictographs; the earliest known alphabets are Semitic; hence the semi-alphabetic Brahmi script could be derived only from the Semitic sources.

This theory has a large number of supporters; but they differ as to which branch of the Semitic writing influenced or produced the Brahmi characters. While some try to find pre- Semitic form of writing like Assyrian cuneiform script, others identify Phoenecian, South Semitic or North Semitic script as the source of theBrahmi

7.21. Assyrian (cuneiform) origin

Scholars like Deecke, Canon Isaac, Taylor and Rhys Davids find Assyrian cuneiform as the source to borrow for the Brahmi Rhys Davids holds that neither the Northern nor the Southern Semites the source of the Brahmi, but the pre- Semitic form of writing which was used in the Euphrates Valley. This theory cannot stand to logic because of the absence of any convincing resemblances between the Assyrian and the Brahmi scripts.

7.22 Phoenecian origin

Weber, Benfy, Jensen and others opine that the earliest Phoenecian alphabet was the source for the derivation of the Brahmi. They argue that aboutone-third of the

Phoenician lettersare identical with the earliest forms of the corresponding Brahmi script. This theory cannot also be substantiated, because the Phoenician script itself is considered as a derivative of the Canaanite (North) branch of the Semitic. Some scholars like R.B. Pandey opine that the Phoenicians themselves were of Indian origin (the Vedic Pani) and thus they might have even carried with them to the shores of the Mediterranean the art of writing and spread it in Western Asia.

7.23. South Semitic origin

The ancient alphabet of Sabaea of the South Semitic family is not older than the middle of the second century B.C. So while Deecke postulates the Assyrian cuneiform characters, the parent of the Sabaean, as the source of the Brahrhi, Canon and Isaac Taylor hold the view that some lost South Semitic alphabet as the parent of the Brahmi. These scholars presume the Brahmi and the Sabaea as sister scripts. It is difficult to support this view. Though the contact between India and Arabia was quite possible, Arabianinfluence on the Indian culture is ribt traceable before the advent of Islam. Further the similarity between the characters of the Brahmi and the Sabaea is negligible. Thus Buehler remarks, "The derivations proposed by Deecke and Taylor do not fulfil the absolutely necessary conditions, and it will probably not be possible to obtain satisfactory results, even if all the impossible equations are given up, and the oldest Indian signs in every case are chosen for comparison.

7.24. North Semitic origin

Sir William Jones (1806), von Seetzen (1811), Kopp (1821), Lepsius (1834), Weber (1856) and Buehler (1896) are the chief exponents of the theory that the Indian alphabet was of the North Semitic origin. Buehler holds that twentytwo letters of the Brahmi alphabet were derived from the North Semitic alphabet, five from the script on the weights from Assyria and the remaining were derived from the borrowed characters by introducing certain devices.

7.25. Aramaic origin

David Diringer advocates a theory that the early Aramaic alphabet was the prototype of the Brahmi script. He bases his theory on the grounds that (1) the acknowledged resemblance of the Brahmi signs to the Phoenecian letters also applies to the early Northern Semitic (Aramaic) letters, and

(2) of all the Semitics the Aramaean traders were the first who came in direct communication with the Indo-Aryan merchants.

The North Semitic theory of Buehler or Diringer is also found to be not foolproof and final.

Several inconsistencies are shown by scholars. To mention, firstly, Buehler maintains that the Indians have made many innovations, improvisations and changes in the Brahmi letters while adapting the North Semitic alphabet. This line of argument presupposes that the Indians were already using some sort of writing and that they were familiar with the Semitic

scnpt. Secondly, the signs belonging to the two systems do not correspond with the similarity or identity of their phonetic values. Thirdly, the Brahmi script differs very much from the Kharosthi scnpt, which was also considered to have been derived from the same North Semitic Alphabet. For example the cerebrals and dentals of the two scripts are derived from different signs of the North Semitic alphabet. This is unimaginable to have two different signs when both have been derived from the same parentage. Fourthly, the numerals of the Brahmi script have nothing in common with the numerals of the North Semitic scripts. Fifthly, the Brahmi was presumed to have been written in the beginning from nght to left like the Norfh Semitic scripts and the Kharosthi. Several scholars opine that the direction of right to left inthe examples quoted must have resulted because of some faulty inscribing. Further the specimens so far known to us with the Brahmi written in the direction of right to left are sporadic and very few m number in comparison with the inscriptions written from left to right.

7.3. Dravidian origin

Edward Thomas (1883) and others hold the view that the Brahmi alphabet was first invented by the Dravidians and it was later borrowed by the Aryans. This theory is based on the presumption that the Dravidians were occupying the entire land in India before the advent of Aryans and invented the art of writing. A forcible argument against the Dravidian origin is that the Tamil, the purest representative of the Dravidian family of languages, has only the first and the fifth letters of each of the five vargas, whereas the Brahmi has all the five letters of a

varga; as such the Proto- Dravidian, the forerunner of Tamil, could not have all the five letters in each varga and thus it cannotbe a source for the Brahmi.

7.4. Aryan or Vedic origin

Lassen (1867), General Cunningham (1881) are the earliest scholars who attempted to find indigenous origin for the Brahmi script. They hold that the Aryan priests developed the Brahmi script from indigenous Indian hieroglyphics. The arguments they have advocated in support of their view were considered to be weak in those days. Taylor remarks: Such an elastic method may establish anything or nothing. In view of the absence of evidence in the form of pre-Asoka inscriptions, to confine the use of hieroglyphic pictures in India, Buehler and others have not paid any attention to the Aryan origin theory. Buehler observes: "Cunningham's opinion, which was formerly shared by some prominent scholars presupposes the use of Indian Hieroglyphic pictures of which hitherto no trace has been found". But the discovery of the Indus Valley script which is hieroglyphic weakened the objections put forward against the theory. Since then various scholars are engaged in search for further sources to support the indigenous origin theory. K.P. Jayaswal claims a connecting link between the pictographic scripts of the Indus Valley and the Brahmi.

R.B. Pandey opines that the Brahmi was derived from pictographs, ideographs, and phonetic signs, the earliest specimens of which are to be found in the Indus Valley inscriptions. He further points out that the derivation of the wordbrahmi itself suggests that the script was intended for the preservation of the Vedas. "As its very name

suggests the Brahmi script was invented by the Indo-Aryans for the preservation of 'Brahma' or Veda and was originally and mainly employed by the Brahmanas, whose duty it was to conserve the Vedic literature and to hand it down to the succeeding generations by writing and copying the texts from time to time and by teaching them to their students".

8. Characteristics of the Kharosthi script

Besides the Brahmi, the Kharosthi is the only script mentioned in the Jaina and Buddhist literatures, which is a vailable for physical verification. Another interesting feature is that both the scripts were found to be used at the same period in the inscriptions of Asoka. There are two Rock Edicts of Asoka found at Mansehra and Shahbazgarhi engraved in the Kharosthi script. Besides these two Rock Edicts there are a large number of Creek, Scythian, Parthian, and Kusana coins assignable to the period between 175 B.C. and A.D. 200. They were bilingual; on one side they bore a legend in Greek and on the other in the Kharosthi. The Kharosthi was confined to the north-western part of India. It did not develop any further as the Brahmi took precedence over the Kharosthi all through the country. It is marked by the following characteristics:

1. It used the same alphabet as the Brahmi, but its characters were different.

2. The letters are generally thin and long, more or less slanting to the right with appendages attached to their upper parts.

3. They are very irregular in shape and size and many forms are confusingly similar.

4. The script is clearly cursive.

5. There are very few looped forms.

6. The script always runs from right to left.

9. Decipherment of the script

Ch. Masson was the first to decipher the Kharosthi inscription on the coins of Menander, Appolodotos and Hermeus. Prinsep followed the researches of Masson and fixed the direction of the script from the right to the left. In 1838 he decided also that the language of the Kharosthi inscriptions was Prakrit. Prinsep, E. Norris and Cunningham could decipher almost all the letters of the Kharosthi alphabet on the coins. This was followed by the reading of the independent inscriptions of Asoka. Buehler prepared a systematic comparative table of the Kharosthi alphabet.

10. Name of the script

The Kharosthi script is known by various names. It is called Bactrian, Indo-Bactrian, Aryan, Bactro-Pali, North-western Indian, Kabulian, Kharosthi, etc. The Kharosthi is the widely accepted popular name on the basis of the Chinese literature in which this name continued upto the seventh century A.D. There are several speculations regarding the name and derivation of the Kharosthi.

Some examples are:

1. According to the Chinese translation of Abhidharma-vibhasa- sutra by Huen-Tsang the Kharosthi was invented by a sage called Kharosthi. The Chinese Encyclopaedia Fa-wan-Su-Lin (A.D. 668), says that the Kharosthi was invented by one divine lndian by name Kharostha (< khara+ostha 'ass-lipped person').

2. Kharostha refers to the barbarous people on the north western boundaries of India, namely, Yavanas 'Greeks', Sakas Scythians', Tusaras 'Kusanas.' and other people of central Asia. The alphabet used by these people is also called by the same name.

3. Kharostha is the Sanskrit form of Kashgar, a province in Central Asia, which was the latest centre of this script.

4. It is the Indian adaptation of the Iranian word kharostha or kharaposta meaning 'ass-skin'. Most probably this script was used for writing on the ass-skin.

5. There was an Aramaic word kharottha used for this script which in course of time, through popular etymology, assumed the Sanskrit form Kharostha.

6. The script may have been called so due to the fact that most of the Kharosthi characters are irregularly elongated curves and they look like the moving lips on an ass, khara. Thus it might be a nick name originally and got currency in course of time.

Some scholars have given an Indian name 'Gandharian' for the Kharosthi on the basis that the Kharosthfinscriptions of Asoka were exclusively confined to the tracts of the Gandhara country of the ancient India.

11. Origin of the script

As in the case of the Brahmin there are two theories current among scholars regarding the origin of the Kharosthi script, namely the Aramaic origin and the indigenous origin.

11.1 .Aramaic origin theory

Chief exponent of this theory is Buehler and his views are widely accepted by the majority of scholars. He formulated his theory of North-Semi tic (Aramaic) origin on the following grounds:

(a) The resemblance between the Aramaic and the Kharosthi characters.

(b) The direction of the Kharosthiand the Aramaic is from the right to the left.

(c) Common characteristics like the absence of long vowels between the Kharosthi and the Semitic scripts.

(d) The appearance of the Kharosthi in India after its Iranian invasion.

(e) The use of the Kharosthi was only in those parts of India which were occupied by the Iranians from the second half of the sixth century

B.C. upto the fourth century B.C.

Buehler derives the Aramaic origin for the Kharosthi script in the following way: The Aramaic language and writing, were frequently employed for official correspondences, accounts and other official purposes during the rule of the Akhaemenian kings in many different provinces of their empire. In Egypt, Western Asia, Arabia and Persia the Aramaic inscriptions are discovered. The Persian Satraps, carried with them also into the Indian territory their staff of subordinates, who were accustomed to the use of the Aramaean letters and language. The Hindus of the Indo- Persian provinces were driven to utilise the characters commonly employed by the scribes and accountants of their conquerors, though they already possessed a script of their own. Thus the Kharosthi alphabet would appear to be the result of the intercourse between the officers of the Satraps and of the native authorities. The Hindus probably used at first the pure Aramaic characters and they introduced in the course of time modifications observable in the Kharosthialphabet. Thus the Kharosthi alphabet is not a Pandit's, but a clerk's alphabet. This alphabet was framed bypersons who paid regard only to the requirements of ordinary life.

11.2. Indigenous origin theory

Cunningham opines that the Kharosthfis an Indian alphabet. The full system of palatals and linguals which are found in the Kharosthi cannot be designed forany other language than Sanskrit, or an ancient Prakrit. Sanskrit and Prakrit are the only forms of speech which possess five sounds of each of the palatals and linguals.

Some Indian scholars like Raj Bali Pandey have tried to continue this line of argument. They argue as follows: The earliest known Kharosthi inscriptions of Asoka belong to the third century

B.C. All other inscriptions in the Kharosthi found in Baluchisthan, Afghanistan and Central Asia are later in date and they clearly indicate that they were carried there by the Indian colonists and the missionaries. Thus it may be held that during the Persian domination over that part of the country the Kharosthi was recognised as a popular script. When the Mauryas of Mid-India occupied that part of the country they had also to adapt the Kharosthi script for that part of the country. Next, the Bactrians, the Parthians, the Sakas, and the Kusanas used this script for Indian languages side by side with the Greek. The long association of the Kharosthi with foreign powers in India in the areas dominated by them created some aversion towards it in the rest of India. With the rise of the Gupta power and the upsurge of the unification of the country and nationalism, the Kharosthi died with its official support. The Brahmi, which was the most widely current script in India, replaced the Kharosthi in the north-west part of India also.

However it may be concluded that a majority of the scholars are of the opinion that the Kharosthi was originally borrowed from Aramaic and later developed various characters like the nasals and anusvara to meet the needs of the native language.

WRITING MATERIALS

The stone, earthen objects, shells and other non-metallic objects like ivory plaques, metals like copper, bronze and iron, palm-leaf, birch-bark and paper are the known materials of writing in ancient India. The palm-leaf is the oldest material put to use for writing.

The writings engraved on stone, metal and other hard substances for public inspection are calledanscriptions, and the writings on any soft material like palm-leaf, cloth and paper with the hand are called manuscripts. The word 'manuscript' is derived from the Latin word manuscriptum in which manus denotes 'the hand' and scriptum 'to write'.

Stones: Rocks, stone pillars or slabs, stone images or their pedastals, stone articles such as jars or their covers, etc., are found used for engraving letters. The stone and copper plates are used when the writings are intended to be everlasting (cirasthitika); thus we find normally engraved on the stone the official and private records, royal proclamations, treaties between kings, agreements between private individuals, grants and donations, poetical effusions (prasastis). The Asoka rock edicts are the earliest instances of incising on stone. There are numerous inscriptions with prasastis. The Allahabad pillar inscription (c. 360 A.D.) of Samudra gupta by Harisena, the Talagunda inscription (c. 460 A.D.) of Santivarman by Kubja, the Mandasor inscription (c. 532 A.D.) of Yasodharman by Vasula and Aihole inscription (A.D. 634) of Pulakesi II by Ravikirti are some of the famous prasastis, which exhibit poetry of high quality. There are also instances, of course very rare, where long poetical compositions were engraved

on several slabs of stone. For example the Rana Kumbha's inscription (A.D. 1460) atKumbhalgadh (Rajasthan) describing the geographical places of Mewar and praising various gods, was engraved on five stone slabs (each one measuring 3'10" broad by 3'7" high). A kavya by name Rdjaprasasti, written in 24 cantos by an Andhra poet called Ranacoda, was engraved on 24 slabs. The poem was in honour of Rana Ra jasimha of Mewar on the occasion of the excavation of the Rajasamudra tank, and the slabs were fixed into the embarkment of the tank. First two acts of the four act play entitled Parijatamanjan, alias Vijayasn by Madana with the poet's patron the king Arjunavarman of Dhar (11th cent. A.D.) as hero was engraved on a slab of black stone at Dhar.1 The engraved portion contains 76 verses with some prose inscribed in early variety ofNagan script Similarly two satakas of 109 verses each composed in the Maharastri Prakrit were engraved on stone slabs. One of the satakas is called Kumarasataka ascribed to Paramara Bhoja (11th cent. A.D.) of Dhar.

Copper-plates: Official charters, especially grants made by kings were generally engraved on copper-plates (called tamra- patra, tamra-sasana, tamra, etc.) to serve the donees as title deeds. There were also copper-plates with yantras of the Brahmanas and Jains engraved in various shapes and sizes. The practice of engraving books on copper-plates is also known; but the instances available to us are not numerous. As recorded by Huen-Tsang, Kaniska caused the Buddhist religious texts to be engraved on copper-plates. The lyrical poems called kirtanas of Annamacarya of Tallapaka family (A.D. 1408-1503) composed in Sanskrit and Telugu were

engraved on many copper-plates. As these devotional songs are on the Lord Venkatesvara, these copper-plates were preserved till recently in the temple of Vehkatesvara at Tirumala. Now under the management of the Tirumula Tirupati Devasthanams, these songs are being edited and published.

Gold and silver: The Buddhist literature refers to the practice of engraving royal orders and religious regulations on golden plates by families of rich merchants. We have also some gold records including a plate bearing a votive inscription in the Kharosthi script discovered in the ruins of Taxila. Similarly inscriptions onsilver were also found in Bhattiprolu and Taxila. Jains sometimes write certain yantras on plates of silver which are found in someJain temples. But gold and silver are too precious metals to be generally used for engraving long literary texts.

The writings on the pedastals of bronze images or on the conch shells, ivory plaques, wooden beams, earthen ware, etc., are used for engraving legends and emblems. Thus we do not have any specimens of engraved texts on these writing materials. D'Alwis asserts that the Buddhist works mention skins among the writing materials. Subandhu also refers in his Vasavadattato the use of skin (ajina) of an antelope or tiger as a writing material. But it did not gain currency in large scale, perhaps because of the leather being treated as ritually impure.

Manuscripts: Palm-leaf, birch-bark, cotton and paper are the common materials for writing long texts of literature. Even in the case of short texts like grants inscribed on stone and metals, they were written first on

palm-leaf or birch-bark before engraved.

Palm-leaf: It is the most common writing material all over India during ancient times. There are two large-leaved palm-trees called tadi or tali (corypha umbraculifera) and tada or tala (borassus flabel liformis), leaves of which are used for writing manuscripts. These two plants are indigenous and grown in abundance in Deccan. By an exhaustive examination of the well-known plam-leaf manuscripts Hoernle opines that all the earlier manuscripts are made from the leaves of tadi. The tala is also called srithala and the number of manuscripts of this leaf are not numerous. The palm-leaf is made fit for writing by a process in which it is first dried, next boiled or soaked in water, then again dried and finally polished with stone or conch-shell and cut to the required uniform size. In South India raw palm-leaves were commonly used for letters and for private and official documents. The palm-leaves were written on with ink all over Northern, Eastern, Central and Western India, whereas in the South India and Orissa the letters were incised with a metallic stilus called salaka or lohakantaka and afterwards blackened with soot or charcoal.

The earliest known manuscripts of palm- leaf date back to circa first century A.D. The fragments of palm-leaf manuscripts representing parts of two plays ascribed to Asvaghosa of Indian literature found in Turfan by a German expedition led byGruendwedei and Hurth are the earliest. The Godfrey collection (4th cent. A.D.), the Horiuzi manuscripts (6th cent. A.D.) are other old specimens so far brought to light.

That the palm-leaf is the oldest writing material in

ancient India could be proved on several literary and archaeological evidences. For example the canon of the Southern Buddhism mentions panna leaf' as the most common writing material in ancient India. According to a Buddhist tradition, presented in the biography of Huen- Tsang (7th cent. A.D.), the canon was written on palm-lea vesatthe first council held immediately after Buddha's death. The size of the copper-plates and birch-bark were used to cut to the size of the palm-leaf, which was most accepted writing material. Thus the Texila copper plates (c. 1st cent. A.D.) was cut to the size of the palm-leaf. Similarly the birch-bark leaves of the Bower manuscripts (5th cent. A.D.) were also cut to the size of the palm-leaf. Further the Greek writer Quintus Curtius (4th cent.B.C.) mentions that the inner bark of trees (i.e. birch-bark) was used as writing material. All these evidences confirm the use of palm-leaf by at least fourth century B.C.

We have numerous palm-leaf manuscripts of the seventh and later centuries from Nepal, Bengal, Rajasthan, Gujarat and the Northern Deccan, besides the above mentioned Horiuzi manuscripts and manuscripts of the Godfrey collection. To mention we have from Nepal the Skandapuram (supposed to have been copied about the seventh century A.D.), the Paramesvara- tantra (c. A.D.859) and the Lahkavatara (A.D. 906- 07). The oldest manuscripts found in South according to Burnell, dates from A.D. 1428. The hot climate of the South could be the cause for the short span of life of the palm-leaves. As established by the Kurud plates of the sixth century, the royal charters were sometimes written on palm-leaf and issued to the donees.

Birch-Bark: Bhurja-patra is in fact the inner bark of the bhurja 'birch tree (Betula Bhojpatra)' which is grown in plenty in the Himalayas. Alberuni informs that the bark of the tree is taken in pieces measuring one yard long and as broad as the out stretched fingures of the hand or less and cut further into various sizes. He also mentions that the bark was made hard and smooth by polishing with oil. The birch bark was put to maximum use in the North-western India (more particularly in Kashmir), and the leaves were normally cut in the size corresponding to our quarto (=about nine by twelve inches). Later on the custom of using birch- bark was spread to the Central, Eastern and Western India, because we find the copper-plates in these parts were also cut to the size of the birch-bark as used in Kashmir. The birch-bark is, however, later than the palm- leaf, as it is evidenced by the fact that the leaves of the Bower manuscript were cut according to the size of the palm-leaves. The manuscripts are written with ink on the bark. The birch-bark was so popular at one time that it was simply called lekharn 'writing', 'a written document' and also the written documents went by the name of bhurja. But it came to disuse in Kashmir after the introduction of paper during the Moghal period.

Quintus Curtius mentions that the Hindus at the time of Alexander's invasion were using the tender inner bark of trees as writing material, without mentioning the word bhurja. The Northern Buddhist and Brahmanical Sanskrit works of subsequent times named it bhurja. Bhurja, indeed, must have been known to the Indo-Aryans even before entering in to Indi a, as the cognates of the word bhurja, Latin fraximus, Old High German bircha, English birch (< PIE bharges), are found in all

Indo-European languages and the plant is also available in Europe.

Among the oldest documents on bircn-bark so far discovered a mention may be made of (1) the Kharosthi Dhammapada, also called Prakrita Dhammapada, consisting of fragments of birch- bark codex acquired in Khotan by a French traveller M. Dutreuil de Rhins assigned to circa first century A.D., (2) the Sanskrit Buddhist work Sarpyuktagama-sutra (c. 4th cent. A.D.), (3) Bower manuscripts (5th cent, A.D.) and (4) Bakhshali manuscripts of a mathematical work (c. 8th cent. A.D.). There are many birch-bark manuscripts preserved in the libraries of Poona, London, Oxford, Vienna, Berlin, etc., and none of which probably dates earlier than the 15th century A.D.

Aloe-bark: In North-eastern India the inner bark of the aguru 'aloe tree' (Assamese sdci, Latin Aquilaria agallocha) was the most popular material for writing manuscripts. A large number of manuscripts written on this bark have been discovered in Assam. One of the oldest manuscripts on the aloe-bark is Sundarakanda of the Kamayam written in the Bengali-Maithili-Assamese characters of about fifteenth century. It is preserved now in the Bibliotheque Nationale (National Library), Paris.

Paper: It is the third popular material used for writing long texts of literature. The Macartney manuscripts consisting of soft kind of paper with darkish colour, probably belonging to the second century A.D. obtained by G. Macartney are the oldest. The next oldest are the Weber manuscripts written in the North western Gupta characters of the fifth century A.D.

These manuscripts were found in Central Asia. Thus some scholars like Hoernle are of the opinion that these papers were not of indigenous origin; they argue on the assumption that the Chinese were the first to make paper in A.D. 105, and that the paper was introduced in India by the Muslims. But we have adequate references in literature for the existence of paper as a writing material. For example, Nearchos, a Greek writer who accompanied Alexander during his Indian inroads in 327 B.C., wrote that the Indians were manufacturing writing paper out of cotton by pounding. P.K. Gode opines that the Indians must have known paper through the Chinese travellers, though it was certainly nota popular writing material.

M.A. Stein refers to a Kashmirian manuscript of the Satapatha-Brahmam on paper which was copied in A.D. I0898. Buehler records a Prayoga work by name Sodasasamskaraprayoga (no author) of 100 leaves dated Samvat 1280 (=A.D. 1223-24) preserved in a private collection in Gujarat. The paper is less durable compared to birch-bark and palm-leaf. This must have been the reason for not having a continuous use of paper; however it replaced the birch-bark and palm-leaf during the Muslim period. By about A.D. 1600 the paper and the Devanagarfscript have become very popular in the whole of South India. For example a paper manuscript of Mahabharata is dated A.D.1585 and another manuscript containing Sutasamhitavyakhya of Madhavamantrin A.D.1601.

Paper sheets were cured before writing by applying a paste prepared by boiling rice or wheat powder in water, to both sides and rubbed with conch or cowrie-shell after

they were dried. This process provides the smoothness to the surfaceand prevents the running of ink. The sheets weregenerally cut to the size of palm-leaf or birch-bark.

Cloth: Pieces of cotton cloth were also used as writing material in ancient India. Like the paper, it was also made ready for writing by applying on it a paste of boiled rice or wheat powder and making its faces smooth by rubbing with conch or cowrie-shell. It is called pata, patika and karpasa-pata. This cloth was used chiefly to write letters, deeds of purchase (kraya-ctrika) and royal charters. Even today in some parts of our country as in Karnataka and Rajasthan the cloth is used. But no large work written on the cotton cloth has come to notice. Buehler found a silk band with the list of the Jain sutras written with ink. Peters found at Anhilvad Patan a cloth manuscript of a Jain Work called Dharmavidhi of Snprabhasuri dated Vikrama-samvat 1418 (=A.D. 1361-62).

Wooden boards: Lastly a mention may be made of wooden boards (phalaka) for writing with chalk (pandulekha). There are no manuscripts written on these boards.

It may be concluded that the Sanskritist has chiefly to handle the manuscripts written on palm-leaf, birch-bark and paper. The normal life of a palm-leaf or paper manuscript preserved in normal condition does not go beyond 500 years. The manuscripts dating back to the fifteenth century and earlier are rare.

PHILOLOGICAL METHOD

In tracing the history of ancient Indian culture consisting of ecologic, material, social, political,

religious and philosophical phenomena, we have to make use of all possible evidences by applying various methods of research. The archaeological, epigraphical and other physical evidences shall not always be available for logical conclusions regarding the remote past. In such cases the language is the most efficient means for understanding the ancient culture. It is because the language has many more functions than communicating the reflections of one to the other and reporting experiences. It defines, analyses and categorises the experience. It directs the perceptual and other faculties of its speakers. Thus the understanding of a text "involves not merely an understanding of the single words in their average significance, but a full comprehension of the whole life of the community as it is mirrored in the words, or as it is suggested by their overtones".

Thus our knowledge and insight in the ancient Indian culture largely depends on the correct understanding of a considerable number of words, phrases and sentences of the Vedic as well as the classical literature. But we observe the opinions of the traditional as well as the modem interpreters differ widely on the exact sense of several words, etc. The divergence in the interpretation may be because of several reasons like (1) the distance in time, space and cultural environment between the ancient Indians and modern specialists, (2) the incompleteness of our sources, (3) their interpretations suggested by the traditional views, and (4) the prejudices and limitations of modem scholarship itself. The modem scholarship is guided (a) by the tenets of contemporaneous philosophy, (b) by the religious conviction, and also (c) by the political systems of the

countries. These difficulties can be overcome by a perfect method of studying the languages and the philological method is suggested here as the most suitable aid.

The term philology means 'science of language' and thus the philological method is one based on linguistics. This method was evolved by Europeans and, indeed, it was an outcome of their discovery of Sanskrit. When the nature of the Sanskrit language and its literature were announced to the Europeans by Sir William Jones in 1786 it aroused their enthusiasm particularly of the Germans. The first thesis of the 25 year old young Indologist Franz Bopp published in 1816, entitled: Ueber das Conjugations system der Sanskrit sprache, in Vergleichung mit jenem der griechischen, lateinischen, persischen and germanischen Sprache... (On the conjugation system of Sanskrit language in comparison with that of the Greek, Latin, Persian and German languages...), laid foundation for the study of the Sanskrit language by the philological method and also for a new branch of linguistics called Comparative Philology. When once the vast Sanskrit literature was made known to the Europeans they realized the full value in restoring the whole literature by making cultural studies and critical editions. In 1852 August Schleicher formulated the programme of the philological method in full details and attempted to carry it out. This, method was aimed at for the reconstruction of prehistoric linguistic data which is of greatest help to prehistoric ethnological reconstruction.

The most essential part of linguistics which is of any consequence is the semantics. The philologists and the

historians have to discuss connections between different connotations of the same terms. The meanings of the words change from time to time and the researcher must be able to trace the stages of the development of the meanings. We can illustrate with an oft-quoted example indrasatru in the benedictive sentence indrasatrur (bhava) varddhasva. As the legend goes, when Vrtra performed a sacrifice in order to gain spiritual power to kill Indra at the conclusion of the sacrifice a benediction in the form of indrasatrur (bhava) vardhasva parallel to raja bhava yuddhyasva is to be formulated by the priests. The word satru in indrasatru is denotative of its derivative sense, namely slayer (sdtayita or samayita). It is not used in the connotative sense of enemy. The compound should be a tatpurusa with acute accent (udatta) on the last syllable of satru meaning that Vrtra shall be the slayer of Indra (indrasya satayitd). But it was pronounced with acute accent on the first syllable in indra and thus the compound becomes a bahuvrihi meaning 'having Indra as slayer'. Thus by the fault of accent Vrtra becomes all powerful, but has Indra as his killer. The bahuvrihi compound indrasatru with satru in its derivative sense is found used in the Rigveda, 1.32.6 and 7. The connotative sense of enemy is a later development. If one fails to understand this historical development of meaning the spirit of the passage would be misunderstood.

The meanings of the words are judged (1) by the influence of historical, social or purely linguistic factors, (2) by determining the role played by connotations and predominant semantic nuclei, (3)by emotion on the part of the speaker and misunderstanding on the part of the hearer, and (4) by

studying the importance of the contexts and situations in which a word or a word group is with a certain regularity used. The phonological, morphological and syntactic considerations help in making connections among cognate words and in determining the semantic nuclei.

The European Sanskritists, the Germans in particular, have evolved certain procedural details to be observed for determining the meanings of various words. They aimed at drawing connections between different connotations of the same terms and discovering the original or initial sense of a term of literary, religious or economic import. For achieving best results one must try to know the initial sense of a name or word. This initial sense shall be the characteristic element around which several other senses have developed during the history of language. The researcher has to draw evolutionistic construction and arrange the senses of ancient terms in such a way that a definite historical development may be read off from the very arrangement. But the great difficulty is that the initial sense is in so many instances not known.

Paul Thieme gives in brief how the initial sense of a word can be arrived at by the philological method. He says that we must find out formal features of words and those traits of usage which are common to all the contexts in which itappears. Then we musthazard a conjecture as to what might be likely "initial meaning" The correctness of that conjecture must be established experimentally:if the 'central idea' hypothetically adapted is recognizable where the word meaning this notion occurs, our conjecture will be right. The risk of erring is possible in the cases of words of infrequent usage. He maintains that it is not

difficult to find a vague term fitting in with our views of the contents of the ancient texts. The etymological sense built up by etymology shall be taken for help to search for the initial sense or fundamental meaning. The etymological sense again in its turn is built up by comparing the cognate words of the family of languages. The etymologically cognate words offer reliable starting points for establishing' initial senses'. It may be noted that all the philological inquiries are centred round the etymological sense built by comparative philology. Rudolf Roth, the founder of the Vedic Philology, introduced the philological method for the interpretation of the difficult parts of the Rgveda. He took the internal evidence "by the minute comparison of all words parallel in form and matter, while taking into consideration context, grammar and etymology, without ignoring either the help supplied by the historical study of the Vedic language in its connection with Sanskrit, or the outside evidence derived from the Avesta and from Comparative Philology". In the application of his method Roth attached too much weight to etymological considerations. This method was followed by many other scholars like A. Bezzenberger, H. Oldenburg, H. Lueders and P. Thieme. Max Mueller has shown the way how this method can be used for the reconstruction of the corrupt readings in making critical editions.8 Several unsolved links in the history of ancient Indian culture were conjectured by this method. A good number of writings have also come with material, sociological, political and economic themes. For example on purely linguistic grounds Wilhelm Rau holds that the donkey and mule were introduced to India from ancient Middle East. P.K. Gode has made many contributions towards the material culture of

ancient India exclusively on the basis of the literary evidences. His papers on perfumes and cosmetics, rose-water, hair-dyes, tambula and beaks, nut-crakers, carnka (gram), aindana (sandal), almond (baddm), tea, tobacco, etc.10 are not only of great interest but also best odels for further research. For example Gode has shown that the hair-dyes were in vogue since c.

A.D. 200 on the basis of a workcalled Navanitaka, and curna (lime) and catechu (khadira), the essential ingredients of tambula, from c.A.D. 100. He traced the history of almond (badam) from c.

A.D. 100 and of tobacco from A.D. 1500. He has produced convincing evidences to show that theart of grafting plants was in practice in India since c. 500 B.C.

The philological method is indeed of great help in restoring the readings of several inscriptions which are defective because of various reasons like the defacement and defects resulted by scribal and textual errors. Many names referring to places as well as individuals are subjected to philological inquiry. For example T.V. Mahalingam gives in his book Early South Indian Palaeography (p. 186) one philological inquiry:

K.G. Sesha Aiyar is inclined to identify on philological grounds the Atiyamans of the Sangam age with the Satiyaputra of Asoka inscriptions. He says: “the initial a (in Atiyaman) becomes ha, which again becomes sa in Prakrit; and mān is an abbreviation for magan which means putra; and thus Atiyaman becomes Satiyaputra on the analogy of Ceraman equals Keralaputra The identification here suggested of Atiyaman with

Satiyaputra satisfactorily accounts for the presence of the particle i in the name appearing in Asoka's edict". Considering also the political set up of the Tamil country during the period the suggestion of Sesha Aiyar seems to be acceptable.

Even though the philological method is much accepted and adapted method, it was subjected to severe criticism and the conclusions drawn on the basis of this method were put to reexamination. Jan Gonda points out that it was due to over emphasis laid on etymologies. He observes that the etymologies in the field of comparative Indo-European linguistics are hypothetical in nature and thus the explanations of words are only possibilities.

Thus there are many words which are explained formally and semantically as deriving from two or more roots in the same language or in cognate languages. Just as Yaska gives more than one root for the etymology of a word, the name of god Vishnu is interpreted by modern philologists diversely as "lord of the spacious upland plains" (vi-snu, cf. sanu surface, table land) or as "the active one” (vi or vī to hasten, to be active', or vis to be active. Thus he opines that the etymologically initial sense is not necessarily identical with the main central sense occurring at a given-period or in a definite body of literature.

Gonda suggests that these defects in the philological method could be rectified by making certain changes in the procedures: (1) The etymology should be resorted to as a means of penetrating through a hypothesis into the prehistory of the words and into their connections with their relatives, if there are any in the cognate languages.

(2) Etymology should not be an argument, even less a starting Point in discussing those text places from a philological point of view.

(3) If there is no evidence in favour of a definite etymology, a philological examination may be done from the points of view of morphology, syntax, etc.

(4) In investigating the significance of Vedic terms relating to conceptions of the world attention should be directed also to the etymologically related terms in the other Indo-European languages in order to detect, as far as possible, which elements in the ideas under discussion were inherited and which were new and proper to the ancient Indians. (5) The meanings of the words should not be determined on the traditional theory of semantic change. It should be examined with the help of modern structural semantics. Reflecting his theory Gonda has examined several words like brahman, vrata, ayatana, amhas, adhvara and adhvaryu.

It is important to note that the critical scholar has to make use of all the material that was open by applying the historical, and philological methods. A thorough cross checking of the validity of the data is necessary. Further the Sanskritist should never entertain the idea that the traditional methods known from the commentaries of Indian writers are of no value. Indeed in many instances they are the starting points to give clues for further scientific investigation. For example, but for the commentaries of Sayana on the Vedic texts, no one would have been able to get even a vague idea of the purport of the Vedic literature. Not only the traditional commentaries but also many other valuable aids like the phenomenology of Religion,

Comparative Religion and Mythology. Ethnology, Comparative Social Anthropology, and Comparative Indo-Iraman linguistics are to be exploited to the best advantage. These sciences may offer general notions and help us in understanding the social factors which have played a part in the formation of the ancient Indian culture.

Module-II

Transliteration, foot notes and endnotes, Plagiarism

Notes: The sources of data which are used for writing the text are indicated meticulously in the notes. It may be furnished either at the bottom of each page or at the end of each chapter. But for the convenience of easy reference it is better to give the references below each page; for, most of the references shall be from the primary sources. The reader can understand at every place how the logic of the thesis is developed. The full description of the source, etc., need not be given in the notes as the full title of the book, author and imprint are furnished in the bibliography, and the abbreviated symbols in the list of abbreviations. Thus the name of the author, title of the text, commentary or their abbreviations, with page or paragraph number are enough after the quotation. The notes furnished at the bottom of each page are called footnotes.

The note-citation differs from the bibliographical citation. While the author, title and imprint are treated as three separate units in a bibliographical citation, they are treated as a single elliptical sentence in a note-citation. The three units are connected by commas and a full point at the end. The name of the author is given in the natural order. Publishing data is furnished depending upon the need. In case it is given, the page number or the paragraph number is given as the last item of the entry; e.g. S. Das Gupta, A History of

Indian Philosophy, I, p. 88, n.l.S. Radhakrishnan, The Principal Upanisads, London, 1953, p. 654.

There are no hard and fast rules as to how the abbreviations are to be used in the note- citations. Any abbreviation used should be clear and easily understandable to the reader. Thus in majority of cases the aesthetic eye of the researcher and the economy of the space govern the modalities for the use of abbreviations. For example Hart's Rules for Compositors and Readers prescribes invariable use of full points in between the abbreviated letters and also at the end of the abbreviation (e.g. C.O.D. for the Concise Oxford Dictionary). After a full point a comma is also recommended and also followed in some books.

There is a general tendency growing among scholars in documentation to omit the intermediary as well as the terminal full points in abbreviations referring to the well-known periodicals, societies and books. The full points are dropped in the case of abbreviations which occur frequently and are pronounced as single words like UNESCO. The MLA Style Sheet prescribes that the full point need not be used at the end of abbreviations except those end in a small letter (e.g. Sun. for Sunday).

In order to avoid repetition of citations time and again in notes and to achieve maximum efficiency in expression and economy in space, some universally accepted abbreviations are used in notes. The researcher has to get acquainted at least with some of them and master to use them appropriately. Some commonly used abbreviations are given hereunder:

A. D. Anno Domini 'in the year of the Lord'. Precedes numerals

anon.	anonymous
b.	born
B. C.	Before Christ. Follows numeral
c.	Copyright
circa.	'about'. Used with approximate dates
cent.	century
cf.	confer 'compare'
ch.,	chs. chapter(s)
d.	died
ed., eds.	editor(s), edition(s)
edn.	edition
e.g.	exempli gratia 'for example'
et al	et alii 'and others'
etc.	et cetera 'and so forth'
ex., exs.	example(s)
f., ff.	and the following
fn.	footnote
ibid., id.	ibidem 'in the same place'

i.e.	id est 'that is'
1.11.	line(s)
loc. cit.	loco citato 'in the place cited'
MS, MSS	manuscript(s). A full point is to be put when a specific manuscript is referred to
N.B.	nota bene 'take notice'
n.d.	no date
no., nos.	number(s)
n.p.	no place (of publication)
op .cit.	work recently noted
opera citato	in the work cited
p., pp.	page(s)
passim	throughout the work, here and there
pub., pubs.	published, publication(s)
q.v.	quod vide 'which see'
resp.	respectively
rpt.	reprint, reprinted
sic	'thus, so'. Put between square brackets to indicate editorial interpolation
st., sts.	stanza(s)

sup. supra 'above'

s.v. sub verbo or voce 'under the word or heading'

TS typescript

V., vv. verse(s)

Vide 'see'

VIZ. videlicet 'namely

vol., vols. volume(s)

vs. versus 'against

3.5. Transliteration: In order to provide maximum help to the readers of the book to judge the validity of the argument the researcher has to give in notes relevant portions from the Sanskrit originals. The accepted practice is to put the Sanskrit passages in the International Phonetic Script, so that any trained scholar can read the texts and make out the sense by consulting dictionaries, etc. This will also facilitate the researcher to get the matter typed with minimum effort on the typewriter. The Sanskrit texts are normally presented by following the orthography of the Sanskrit grammars. The Sanskrit alphabet is represented by the following roman letters with diacritical marks:

Vowels:

अ	आ	इ	ई	उ	ऊ	ऋ
ॠ	ऌ	ॡ	ए	ऐ		
a	ā	i	ī	u	ū	i
i¯	ḷ	ḷ¯	e	ai		
ओ	औ					
o	au					

Stops

क	ख	ग	घ	ङ
k	kh	g	gh	ń
च	छ	ज	झ	ञ
c	ch	j	jh	ñ
ट	ठ	ड	ढ	ण
t	th	d	dh	ṇ
त	थ	द	ध	न
t	th	d	dh	n
प	फ	ब	भ	म

p ph b bh m

Semivowels

य र ल व

y r l v

Spirants

श ष स ह

ś ş s h

Unvoiced spirant (visarga) : h

Guttural unvoiced spirant (jihvamulfya) h

Labial unvoiced spirant (upadhmanTya) h

Pure nasal (anunasika) & m/m

The internal sandhi is represented as in Sanskrit orthography without any break. But in the case of external sandhi a laxity is observed in representing the junction. Excluding the instances of lengthening and diphthongization, the junction is shown by space. Further there is no need for capitals in transliteration of Sanskrit and Indianvernaculars; e.g.

अग्ने यं यज्ञमध्वरं

विश्वतः परिभूरसि।

स इद्देवेषु गच्छति।।

agne, yam yajnam adhvaram

visvatah paribhurasi /

sa iddevesu gachati // RV. 1.1.4.

PLAGIARISM

You have probably read or heard about charges of plagiarism in disputes in the publishing and recording industries. You may also have had classroom discussions about student plagiarism in particular and academic dishonesty in general. Many schools have developed guidelines or procedures regarding plagiarism. Honor codes and other means to promote academic integrity are also common. This section describes ethical considerations in research writing and can help you avoid plagiarism and other unethical acts.

Definition of plagiarism

Derived from the Latin word plagiarius (kidnapper), to plagiarize means "to commit literary theft: and to "present as new and original an idea or product derived from an existing source" (Merriam-webster's Collegiate Dictionary [11th ed.; 2003; print]). Plagiarism involves two kinds of wrongs. Using another person's ideas, information or expressions as your own to get a better grade or gain some other advantage constitutes fraud. Plagiarism is sometimes a moral and ethical offense rather than a legal one since some instance of plagiarism fall outside the scope of copyright infringement, a legal offense.

Consequences of plagiarism

A complex society that depends on well- informed citizens strives to maintain high standards of quality

and reliability for documents that are publicly circulated and used in government, business, industry, the professions, higher education, and the media. Because research has the power to affect opinions and actions, responsible writers compose their work with great care. They specify when they refer to another author's ideas, facts and words, whether they want to agree with, object to or analyse the source. This kind of documentation not only recognizes the work writers do; it also tends to discourage the circulation of error, by inviting readers to determine for themselves whether a reference to another text presents a reasonable account of what that text says. Plagerists undermine these important public valuse. Once detected, plagarism in a work provokes skepticism and even outrage among readers, whose trust in the author has been broken.

The charge of plagarism is a serious one for all writers. Plagarists are often seen as inccompetent – incapable of developing and expressing their own thoughts- or, worse, dishonest, willing to deceive others for personal gain. When professional writers, such as journaists, are exposed as plagarists, they are likely to lose their jobs and they are certain to suffer public embarrassment and loss of prestige. Almost always, the course of a writer's career is permanently affected by a single act of plagarism. The serious consequesnces of plagarism reflect the valuse the public places on trustworthy infromation.

Students exposed as plagarists may suffer severe penalties, anging from failure in the assignment or in the course to expulsion from school. This is because student plagerism does considerable harm. For one thing, it damages teachers relationships with stuudents,

turning teachers into detectives instead of mentors and fostering suspicioninstead of trust. By undermining institutional standers for assigning grades and awarding degree, student plagarism also becomes a matter of significance to the public. When graduates skills and knowledge fail to match their grades, an institution's reputation is damaged. For example, no one would choose to be treated by a physician who obtained a medical degree by fraud. Finally, students who pagarize harm themselves. They lose an important opportunity to learn how to write a research paper. Knowing how to collect and analyze information and reshape it in essay form is essential to academic success. This knowledge is also required in a wide range of careers I law, journalism, engineering, public policy, teaching, business, government and not-for-profit organizations.

Plagarism betrays the personal element in writing as well. Discussing the history of copyright, Mark Rose notes the tie between our writing and our sense of self – a tie that, he believes, influenced the idea that a piece of writing couk=ld belong to the person who wrote it. Rose says that our sense of ownership of the words we write "is deeply rooted in our conception of ourselves as individuals with at least modest grade of singularity, some degree of personality" (Authors and Owners: The invention of copyright [Cambridge: Harvard UP, 1993: print; 142]). Gaining skill as a writer opens the door to learning more about yourself and to developing a personal voice and approach in your writing. It is essentioal for all student writers to understand how to avoid committing plagarism.

2.3. INFORMATION SHARING TODAY

Innumerable documents on a host of subjects are posted on the Web apparently for the purpose of being shared. The availability of research materials and the ease of transmitting, modifying, and using them have influenced the culture of the Internet, where the free exchange of information is an ideal. In this sea of materials, some students may question the need to acknowledge the authorship of individual documents. Professional writers, however, have no doubt about the matter. They recognize the importance of documentation whether they base their research on print or electronic publications. And so they continue to cite their sources and to mark the passages they quote. In the culture of the academy, too, the free exchange of information is a long-standing ideal. Under certain circumstances, this ideal is described as academic freedom. But nothing about academic freedom or the free exchange of information implies ignoring authorship. Academic standards require all writers to acknowledge the authors whose work they use when preparing papers and other kinds of studies and reports. New technologies have made information easier to locate and obtain, but research projects only begin with identifying and collecting source material. The essential intellectual tasks of a research project have not changed. These tasks call for a student to understand the published facts, ideas, and insights about a subject and to integrate them with the student's own views on the topic. To achieve this goal, student writers must rigorously distinguish between what they borrow and what they create. As information sharing has become easier, so has plagiarism. For instance, on the Internet it is possible to buy and download completed research papers. Some students are misinformed about buying

research papers, on the Internet or on campus. They believe that if they buy a paper, it belongs to them, and therefore they can use the ideas, facts, sentences, "and paragraphs in it, free from any worry about plagiarism. Buying a paper, however, is the same as buying a book or a magazine. You own the physical copy of the book or magazine, which you may keep in your bookcase, give to a friend, or sell. And you may use whatever you learn fromreading it in your own writing. But you are never free from the obligation to let your readers know the source of the ideas, facts, words, or sentences you borrow. Publications are a special kind of property. You can own them physically, but the publisher or author retains rights to the content. You should also know that purchased papers are readily recognizable, and teachers can often trace downloaded materials through an Internet search.

2.4. UNINTENTIONAL PLAGIARISM

The purpose of a research paper is to synthesize previous research and scholarship with your ideas on the subject. Therefore, you should feel free to use other persons' words, facts, and thoughts in your research paper, but the material you borrow must not be presented as if it were your own creation. When you write your research paper, remember that you must document everything that you borrow-not only direct quotations and paraphrases but also information and ideas.

Often plagiarism in student writing is unintentional, as when an elementary school pupil, assigned to do a report on a certain topic, copies down, word for word, everything on the subject in an encyclopedia.

Unfortunately, some students continue to take this approach in high school and even in college, not realizing that it constitutes plagiarism. To guard against the possibility of unintentional plagiarism during research and writing, keep careful notes that always distinguish among three types of material: your ideas, your summaries and paraphrases of others' ideas and facts, and exact wording you copy from sources. Plagiarism sometimes happens because researchers do not keep precise records of their reading, and by the time they return to their notes, they have forgotten whether their summaries and paraphrases contain quoted material that is poorly marked or unmarked. Presenting an author's exact wording without marking it as a quotation is plagiarism, even if you cite the source. For this reason, recording only quotations is the most reliable method of note- taking in substantial research projects, especially for beginning students. It is the surest way, when you work with notes, to avoid unintentional plagiarism. Similar problems can occur in notes kept electronically. When you copy and paste passages, make sure that you add quotation marks around them. (See 1.7 for more on note-taking.)

Another kind of unintentional plagiarism happens when students write research papers in a second language. In an effort to avoid grammatical errors, they may copy the structure of an author's sentences. When replicating grammatical patterns, they sometimes inadvertently plagiarize the author's ideas, information, words, and expressions.

If you realize after handing a paper in that you accidentally plagiarized an author's work, you should

report the problem to your instructor as soon as possible. In this way you eliminate the element of fraud. You may receive a lower grade than you had hoped for, but getting a lower grade is better than failing a course or being expelled.

2.5. FORMS OF PLAGIARISM

The most blatant form of plagiarism is to obtain and submit as your own a paper written by someone else (see 2.3). Other, less conspicuous forms of plagiarism include the failure to give appropriate acknowledgment when repeating or paraphrasing another's wording, when taking a particularly apt phrase, and when paraphrasing another's argument or presenting another's line of thinking.

Repeating or Paraphrasing Wording

Suppose, for example, that you want to use the material in the following passage, which appears on page 625 of an essay by Wendy Martin in the book Columbia Literary History of the United States.

ORIGINAL SOURCE

Some of Dickinson's most powerful poems express her firmly held conviction that life cannot be fully comprehended without an understanding of death.

If you write the following sentence without documentation, you have plagiarized because you borrowed another's wording without acknowledgment, even though you changed its form:

PLAGIARISM

Emily Dickinson firmly believed that we cannot fully comprehend life unless we also understand death.

But you may present the material if you cite your source:

As Wendy Martin has suggested, Emily Dickinson firmly believed that we cannot fully comprehend life unless we also understand death (625).

The source is indicated, in accordance with MLA style, by the name of the author ("Wendy Martin") and by a page reference in parentheses, preferably at the end of the sentence. The name refers the reader to the corresponding entry in the works-cited list, which appears at the end of the paper.

Martin, Wendy. "Emily Dickinson." Columbia Literary History of the United States. Emory Elliott, gen. ed. New York: Columbia Up, 1988. 609-26. Print.

Taking a Particularly Apt Phrase

ORIGINAL SOURCE

Everyone uses the word language and 'everybody these days talks about culture. . . .

"Languaculture" is a reminder, I hope, of the necessary connection between its two parts....

(Michael Agar, Language Shock: Understanding the Culture ofConversation [New York: Morrow, 1994; print; 60])

If you write the following sentence without documentation, you have committed plagiarism because

you borrowed without acknowledgment a term ("languaculture") invented by another writer:

PLAGIARISM

At the intersection of language and culture lies a concept that we might call "Ianguaculture."

But you may present the material if you cite your source:

At the intersection of language and culture lies a concept that Michael Agar has called "Ianguaculture" (60).

In this revision, the author's name refers the reader to the full description of the work in the works-cited list at the end of the paper, and the parenthetical documentation identifies the location of the borrowed material in the work.

Agar, Michael. Language Shock: Understanding the Culture of Conversation. New York: Morrow, 1994. Print.

Paraphrasing an Argument or Presenting a Line of Thinking

ORIGINAL SOURCE

Humanity faces a quantum leap forward. It faces the deepest social upheaval and creative restructuring of all time. Without clearly recognizing it, we are engaged in building a remarkable civilization from the ground up. This is the meaning of the Third Wave.

Until now the human race has undergone two great waves

of change, each one largely obliterating earlier cultures or civilizations and replacing them with the ways of life inconceivable to those who came before. The First Wave of change-the agricultural revolution took thousand so years to play itself out. The Second Wave-the rise of industrial civilization-took a mere hundred years. Today history is even more accelerative, and it is likely that the Third Wave will sweep across history and complete itself in a few decades. (Alvin Toffler, The Third Wave [1980; New York: Bantam, 1981; print; 10))

If you write the following sentence without documentation, you have committed plagiarism because you borrowed another writer's line of thinking without acknowledgment:

PLAGIARISM

There have been two revolutionary periods of change in history: the agricultural revolution and the industrial revolution. The agricultural revolution determined the course of history for thousands of years; the industrial civilization lasted about a century. We are now on the threshold of a new period of revolutionary change, but this one may last for only a few decades.

But you may present the material if you cite your source:

According to Alvin Toffler, there have been two revolutionary periods of change in history: the agricultural revolution and the industrial revolution. The agricultural revolution determined the course of history for thousands of years; the industrial civilization lasted about a century. We are now on the threshold of a new period of revolutionary change, but this one may last for only a few

decades (1 O).

In this revision, the author's name refers the reader to the full description of the work in the works-cited list at the end of the paper, and the parenthetical documentation identifies the location of the borrowed material in the work.

Toffler, Alvin. The Third Wave. 1980. New York: Bantam, 1981. Print.

2.6. WHEN DOCUMENTATION IS NOT NEEDED

In addition to documenting direct quotations and paraphrases, you should consider the status of the information and ideas you glean from sources in relation to your audience and to the scholarly consensus on your topic. In general, information and ideas you deem broadly known by your readers and widely accepted by scholars, such as the basic biography of an author or the dates of a historical event, can be used without documentation. But where readers are likely to seek more guidance or where the facts are in significant dispute .among scholars, documentation is needed; you could attribute a disputed fact to the source with which you agree or could document the entire controversy. While direct quotations and paraphrases are always documented, scholars seldom document proverbs, sayings, and cliches. If you have any doubt about whether you are committing plagiarism, cite your source or sources.

2.7. RELATED ISSUES

Other issues related to plagiarism and academic integrity include reusing a research paper, collaborative work, research on human subjects, and copyright infringement.

2:7.1. Reusing a Research Paper

If you must complete a research project to earn a grade in a course, handing in a paper you already earned credit for in another course is deceitful. Moreover, you lose the opportunity to improve your knowledge and skills. If you want to rework a paper that you prepared for another course, ask your current instructor for permission to do so. If you wish to draw on or reuse portions of your previous writing in a new paper, ask your instructor for guidance.

2.7.2. Collaborative Work

An example of collaborative work is a group project you carry out with other students. Joint participation in research and writing is common and, in fact, encouraged in many courses and in many professions. It does not constitute plagiarism provided that credit is given for all contributions. One way to give credit, if roles were clearly demarcated or were unequal, is to state exactly who did what. Another way, especially if roles and contributions were merged and shared, is to acknowledge all concerned equally. Ask your instructor for advice if you are not certain how to acknowledge collaboration.

2.7.3. Research on Human Subjects

Many academic institutions have policies governing

research on human subjects. Examples of research involving human subjects include clinical trial sofa drug or personal interviews for a psychological study. Institutions usually require that researchers obtain the informed consent of human subjects for such projects. Although research for a paper in high school or college rarely involves human subjects, ask your instructor about your institution's policy if yours does.

2.7.4. Copyright Infringement

Whereas summaries, paraphrases, and brief quotations in research papers are normally permissible with appropriate acknowledgment, reproducing and distributing an entire copyrighted work or significant portions of it without obtaining permission to do so from the copyright holder is an infringement of copyright law and a legal offense, even if the violator acknowledges the source. This is true for works in all media. For a detailed discussion of copyright and other legal issues related to publishing, see chapter 2 of the MLA Style Manual and Guide to Scholarly Publishing[Srd ed.; New York: MLA, 2008; print).

2.8. SUMMING UP

You have plagiarized if

- you took notes that did not distinguish summary and paraphrase from quotation and then you presented wording from the notes asif it were all your own.

- while browsing the Web, you copied text and pasted it into your paper without quotation marks or without citing the source.

- you repeated or paraphrased someone's wording withoutacknowledgment.

- you took someone's unique or particularly apt phrase without acknowledgment.

- you paraphrased someone's argument or presented someone's line of thought without acknowledgment.

- you bought or otherwise acquired a research paper and handed in part or all of it as your own.

You can avoid plagiarism by

- making a list of the writers and viewpoints you discovered in your research and using this list to double- check the presentation of material in your paper.

- keeping the following three categories distinct in your notes: your ideas, your summaries of others' material, and exact wording you copy.

- identifying the sources of all material you borrow-exact wording, paraphrases, ideas, arguments, and facts.

- checking with your instructor when you are uncertain about your use of sources.

Module -III

Selection of a research problem- collection of materials- primary and secondary sources- taking notes

SELECTION OF RESEARCH PROBLEM

Formulation of a research problem is the most difficult task. The word problem is derived from the Greek word problema [< pro = before, ballo = to throw] 'to throw forward' and means a question thrown for a solution. It means a question for which no readymade answer is available from previous experience or instinct. Thus there arises a sort of confusion or ambiguity which has to be cleared up by over-coming'/all the obstacles in the knowledge through the removal of gaps. So a problem means a question for which solution is to be sought by careful examination. The researcher has to choose such a problem in the field of his interest as his topic. A successful completion of the investigation throws open many truths or our knowledge for further investigation or utilization.

The selection of a topic can be possible only when all the research work that has been done up to date is known. But a research student when he joins for research does not possess the required grounding in the subject. So he has two alternatives. Firstly he may take the expertise help from his teachers who have already

mastered the subject in depth. A teacher who is involved in research is a fund of research problems. Secondly the student may himself identify the topic by getting acquainted with current trends in the field of specialization in which he is emotionally interested. The books on histories, handbooks, dissertation abstracts, encyclopaedias and recent writings on the subject give a general frame work of the work that has been done and the aspects of subject which need further investigation. He may discuss with his research guide and decide upon the topic by narrowing down the scope of investigation by satisfying the following requirements:

1. The researcher's interest, intellectual curiosity and drive should be satisfied. The successful completion of the thesis depends much on the sustained interest of the researcher. If the subject is not upto the taste of the researcher, the task becomes an unholy burden.

2. The research topic should be practicable. In other words the topic by its very nature should be feasible to be completed within the required period of time.

3. The study in its end form should furnish a basis for confirming some earlier study or form a basis for some future study. It means that the results should have some practical or utilitarian significance.

4. It should meet a social need or personal ambition. The researcher may aim at doing research either with an intention to serve the cause of humanity, or to attain some monetary gains in the form of position in employment.

5. Adequate supervision is essential for undertaking research in a particular branch of learning. One should not adventure to take up a topic in the absence of the guidance of specialists in the field of research.

6. Library facilities should be sufficient. In the absence of ready access to the required source material a particular topic becomes simply unsuitable. Sometimes, it so happens that in spite of the good intentions of the research guides, some source materials are not made available to the researcher because of personal prejudices and administrative reasons. So all the required source material should be within the reach of the researcher.

7. The financial position of the researcher should be sound. Either he should be financially sound to support himself or get a scholarship during the period of research.

COLLECTION OF MATERIAL AND NOTES TAKING

Review of literature: After the topic of research is decided, it is essential to review all the relevant material which is a bearing on the topic. With the help of the tools of research the researcher has to know all the previous research studies, as it is incumbent on his part to show how the problem under investigation is advancement to the work so far done. It is expected that the proposed study should not have been done previously. Even though completely new and original topic is in fact impossible in Sanskrit, at least some aspects of it should be of value to shed light on the chosen problem. A complete record of the conclusions arrived at

by the previous researches is to be drawn to explain some underlying theory of the present problem.

Collection of Material

The first step is the identification of the required reading material and preparation of a working bibliography for the thesis. The schedule of various processes may be as follows:

1. Study of the scope and coverage of the subject.

2. Search for documents.

3. Physical verification of the documents.

4. Preparation of the entries: (a) description, (b) annotation and (c) abstracting.

5. Preparation of the working bibliography.

1. Study of the subject: Histories, dictionaries, encyclopedias, handbooks, 'outline type books', etc., are to be consulted first. This gives a general idea of the subject the researcher has to master. A general knowledge of the library or bibliographic classification schemes is helpful to identify the required books, besides guiding the researcher to reach the concerned books in the stacks.

2. Search for documents: Now the researcher has to begin consulting the various types of bibliographies to identify the availability of books and journals. The consultation of the bibliographies helps the researcher in more than one way, To mention, (a) the researcher can gaze the work done upto date in different sub-areas, (b) he

can trace the areas in which duplication of work has been done, (c) he can see the activities in the fringe subjects and the areas of overlap between his and its related subjects, and (d) he can identify the areas of his subject which are not yet exploited.

The success of the researcher is mainly depending on identifying the aspects of the subject which are either unearthed or left with several gaps and controversies. Incidentally the researcher may note down the top names in the field and try to contact them for clarifications and assistance.

3. Physical verification of the documents: A working bibliography for a given topic, worth the name, can be made only after examination of documents as far as possible. The physical verification gives authenticity to the description of documents. The researcher has to examine everydocument on the following questions:

(a) Of which edition of the book is this copy?

(b) What is the date of publication of this copy?

(c) What is the date of first publication of this book?

(d) Is the book on hand an authentic copy?

and

(e) Is there any fraud in this copy?

This examination is essential before a researcher takes a particular document as his authority for his citation in his thesis.

4. Preparation of the entries: Now a record of the document is to be made on a card (normally of 12.5 x 7.5 cm = 5" x 3" size). The description of the record contains author, title, imprint and collation. To fix the complete identity of an author, the full name, without initials, should be given. The statement of the title should also be in full, for the title of a document indicates generally the nature and scope of the contents. The translator, editor, commentator, illustrator, etc., also form part of the title. The imprint of a document consists of the place of publication, the name of the publisher and the date of publication. Finally collation is a statement regarding the extent of the document in pages or volumes, pages, bibliography, index and also the series note. Example: Chinmulgund, P.]., V.V. Mirashi. Review of Indological Research in last 75 years. Poona, M.M. Chitraoshastn Felicitation Committee and Bharatiya Charitrakosha Mandal, 1967. M.M. Chitraoshastri Felicitation volume. Pp.xxviii, 849.

Annotation and abstracting are not compulsory in every entry. But when the researcher feels their need he may add. In an annotation is given a descriptive and factual information or a critical judgment of the document in question. Abstracting has its methodology; it gives the following information: (i) the exact boundary of the subject treated, (ii) the new thought embodied, (iii) new factual data recorded, and (iv) relation of the document to any other work intimately associated with it. For the part of the articles, the same procedure of description as mentioned above is followed with the addition of the statement of the host document or journal in the imprint.

Notes Taking

Just as the bibliography is prepared on cards, notes can also be taken on cards. One may use the cards of bigger size, say 10 x 15 cm (4" x6") or 13 x 20 cm (5" x 8"). To increase the utility of the cards the following procedures are to be followed:

(a) One idea, fact or concept is to be recorded on each card. This is helpful to arrange the cards according to the necessity at the time of making the draft of the thesis.

(b) Key words or phrases are to be recorded at the top of each card as a heading. These headings help to have classification and cross- classification of the data, besides helping to identify the notes without going through the whole content.

(c) In the notes sufficient information should be written to make use of while writing the draft without referring to the originals again.

(d) A note can be an abstract of the content or a verbatim reproduction. In case of quoting verbatim the quotation marks are to be used, by which the same thing can be cited in the footnotes. If any part of the quotation, either at the beginning or in the middle of a sentence, it should be indicated by ellipsis marks (...).

When the notes cards are arranged according to the logic of the thesis or the scheme of argument, it is very easy to make the rough draft and to draw conclusions.

Module – IV

Thesis format

The preliminaries – the text- references- appendix- bibliography

THESIS FORMAT

The thesis in its end form is meant for its readers, who are supposed to find its utility in widening the horizons of human knowledge and culture. A scholar of an allied subject like History, Sociology, Anthropology, Sociobiology, Linguistics, Psychology and Political Science may be its prospective reader. So the thesis is to be presented in such a form which would promote interest to go through the book. The capacity to sustain the interest of the reader is the touchstone for the success of the thesis. The logical sequence of the matter and the mechanical precision influence greatly the mind of the reader. While the eye is attracted by the elegance in the neat execution, the interest is sustained by the skill in presenting the matter in unity and clarity. The size and colour of the paper, the flawless typing of the matter, uniform spacing on all the sides of the paper are external contributors for the elegance of the book. Besides these there are certain standardized specifications in the mechanical form as well as the logical sequence, both of which constitute the format of the thesis.

According to the mechanical specifications, the thesis is to be typed on one side only of good white paper 21.8 x 28 cm (8 1/2x 11") in size. A margin of 4 cm (11 /2 inches) at the top and left side and of 2.5 cm (one inch) at the bottom and right side of the page should be left consistently. The text should be typed with double spacing and all the pages are to be numbered serially either in the upper right comer or centered at the top. The notes, when typed below each page, may be typed in 1 1/2 space to give elegant appearance. The notes may also be typed at the end of each chapter.

According to the logical sequence of the thesis format, which has been conventionally followed by both the traditional and modern scholars of today, the items to be followed in order may be listed as follows:

1. The Preliminaries - comprising (1) title page, (2) preface, (3) table of contents and (4) list of abbreviations.

2. The Text - consisting of (1) introduction, (2) main body of the thesis, and (3) conclusions.

3. The Reference Material - consisting of (1) appendix, (2) Bibliography and (3) index.

1. The Preliminaries

l.1. The title page: The title page of the dissertation or thesis is to be made just in the same way as that of a printed book with some additional information. This should contain the title of the thesis, name of the writer, name of the course for which the thesis is submitted, name of the department, name of the University, college or institution and date or year of submission of the thesis'

1.2. Preface: The preface contains what we call anubandhacatustaya in our traditional methodology, comprising (1) the scope and content of the subject matter (visaya), (2) the purpose of the research (phala), (3) the relation between the subject and the purpose (sambandha) and (4) the prospective reader {adhikarin). In other words the preface should answer the following questions: (1) why this particular subject has been chosen? (2) What are the limitations of the treatment? (3) What are the thrust areas to be explained? (4) How is it going to contribute to the human knowledge and culture of the nation?, and (5) which type of readers the book is meant for? The preface thus contains all the relevant matter not forming, in any way, the part of the text but focusing the background behind the formulation of the text. This is further aimed at to enthuse the prospective readers of the benefits by going through the following pages. Thus the preface and conclusion stand in apposition as the cause and the effect.

A preface can be short or long depending upon the situation. For example Katyayana dispenses with the preface of his commentary called Varttika on the Astadhyayiof Panini, with a few sentences. While Patanjali takes pains to elaborate his prefatory note running into several pages with arguments in favour of the grammatical studies. Thus the Paspasahnika of the Mahabhasya is a best example of a lengthy traditional preface. The prefaces of Sayana and Max Mueller to the Rgveda-samhita are other examples for lengthy prefaces.

It is customary in the modern works to include one or two paragraphs to acknowledge the help received from

such persons like (1) the research supervisor who is the nearest adviser and benefactor to the student, (2) those who have rendered help by way of consultations and discussions, and (3) the institutions and organisations who have financed the project and also those who have provided all the infrastructure facilities. In expressing thankfulness to others the researcher should be honest in thought and simple in expression.

1.3. Table of contents: The table of contents includes the preface, the introduction, the chapters with their subdivisions and bibliography, appendix, index and illustrations or plates if any. Page numbers are to be given for each of the entries. The main chapter, and its subchapters with further subdivisions are indicated either by indentation or by a numerical system. An examination of a number of standard books will give a clear idea of the discipline that is needed to be learnt by observation.

The table of contents presents the skill of the researcher in organisation of the text. The text, in fact, is a piece of art, which is to be developed in such a fashion as a sculptor chisels the stone into a beautiful idol of worship and beauty. The contents give various limbs and also the art of their assemblage so as to satisfy the requirements of his readers. This should promote the enthusiasm of the reader being kindled by the preface.

1.4. List of abbreviations: The important books and authors who are to appear time and again in the body of the thesis are signified by abbreviations. For example in a thesis written on the contribution of Vedantadesika to Visistadvaita, one may use the abbreviations VD and R for Vadantadesika and

Ramanuja respectively; these two names are likely to appear on every page, and sometimes in many lines on each page. When the research is concerned with editing, each manuscript used for the critical edition should be described of its physical configurations besides giving abbreviations. The abbreviations should not be too arbitrary, unless otherwise needed as in numbering various manuscripts used for making critical edition. In other words, the abbreviations are to be built on the basis of the words for which they are made, so that the reader does not struggleto identify them. All the abbreviations are to be listed out and the list is to be placed before the introduction. One should not resort to the use of too many abbreviations in the text of the thesis, because the numerous abbreviations task the reader's memory and block the easy reading of the thesis. In such cases prolixity by giving full names is preferable to brevity by abbreviations. Thus the authors, titles of books or concepts which occur either in a particular chapter or occasionally in the thesis should not be abbreviated.

2. The Text

The introduction, the make body of the thesis and the conclusion constitute the text of the thesis. The success of a research programme lieschiefly in the selection, arrangement and interpretation of facts. While the selection of the facts for research is at the exclusive discretion of the researcher, the arrangement is by his power ofjudgement. So a clear analysis of the types of data that is to be arranged is the basic requirement of a good thesis. All the matters thus collected are grouped into various sections constituting the text. The data that

has been collected may be grouped into four categories, namely, (1) the concepts which are presupposed and pre- determined, and functioning as maxims, on the basis of which the thesis is to be developed, (2) aspects of the selected topic which have been settled by earlier researches, (3) aspects which are still open for discussion being left controversial, and (4) aspects which are not yet explained by others.

The main part of the thesis is concerned with the data relating to the third and fourth categories. In order to devote at full length and to make precise the approach in the main text, all the related matters belonging to the first and second categories above are to be separated and put in the introduction.

2.1. Introduction: It should be written with all care to serve the following aims: (a) To introduce the problem in a suitable context, (b) To give a resume of the history of the subject, (c) To summarise all the relevant details which have been already settled, (d) To stimulate interest of the reader, (e) To explain the actual problem, (f) To justify the study, and (g) To inform the readers the sources of the data which are mainly used.

For example, in the Dhvanyaloka Anandavardhana gives in brief the prima facie views in one verse followed by a brief explanation, before the exposition of his Dhvani theory with all ramifications. Similarly in his Adhyasabhasya Sjankaracarya gives in brief the views which run against the Advaita concept and this introduction serves to acquaint the readers with the chief opponents who are going to figure in the main discussion. This methodology holds good even in modern dissertations. For example a book devoted to Sanskrit

Linguistics should start with an introduction on 'the definition and nature of language' in general. Therefore the area of introduction is limited to the explanation of all the relevant items which make easy the reading of the main text.

2.2. Main body of the thesis: It is not possible to give any rules or specifications as to how the main body of the thesis should be shaped. It is because the intuition (pratibha) and the skill of the researcher acquired by practice and observation (abhyasa) decide the breakup of the thesis into various sections and sub-sections. However we may draw some general principles that are to be observed systematically for a satisfactory presentation.

(a) The content of the thesis should be classified into chapters, major sections and minor sections. The matter is to be presented in such a way that there should not be any reference to what is going to be discussed in the following chapters or sections. In other words each succeeding chapter may have a bearing on the discussion of the preceding chapter but not vice-versa.

(b) Each point should be discussed bringing together the opinions of different scholars and substantiated with arguments.

(c) In presenting the arguments of different authors on a particular point, the recording should be done strictly following the chronology, every new point added shall become a new aspect introduced in the system; now it can be examined whether this new point was from the intuition or ingenuity of the author or did he borrow from the other system to bridge the gaps in

the argument For example E. Frauwallner proved that Dihnaga borrowed some concepts of time from the Sambandha-samuddesa of Bhartrhari's Vakyapadiya in his Traikdlyapanksa.

(d) When one and the same point is said by different authors, the earliest author should be quoted and explained. A passing reference may be made to the other authors either in the text or in the notes. The number of upholders of the same idea corroborate the acceptability of the concept. While the modi fications testify the critical examination to which a particular theory is exposed; both the views strengthen the value of the basic concept. The similarities and differences between the Bhamatf and the Vivarana schools testify the popularity of the Advaita doctrine.

(e) The quotations cited by different authors should be traced by referring to the originals.

(f) In case of difference in the readings of the original and the quotation, which often happens in Sanskrit literature, one of the readings is to be determined on the basisofthecontextual evidence and the differences are to be recorded in the notes. This helps the reader to appreciate the honesty as well as the intellectual efficiency of the researcher. In case the originals are not to be traced, the same is to be reported with a note in the notes.

(g) Under no circumstances, either in the form of quoting in verbatim or in abstracting the original text, the matter which has already been mentioned should be repeated. In quoting, one may use ellipsis marks (...) to omit the irrelevant portions. This would enhance the

readability of the content and exhibit the scholarliness of the researcher.

(h) Accuracy in documentation goes a long way to make the thesis valuable and dependable.

3. Reference Material

The reference material consists of facts used for the formulation of the theory presented in the main body of the thesis. A fact which has been used by a researcher for the interpretation of one truth or theory may be used by another to arrive at another allied theory. Therefore the organization or arrangement of the facts is the mirror of the intelligence, imagination, skills and intellectual honesty of the researcher. In order to facilitate the readers of the thesis and to appreciate the talents, the researcher has to be very air and frank in showing all facts discussed in the thesis. For this purpose are aimed the appendix, bibliography, index and notes.

3.1. Appendix: While writing the main text of the thesis, maximum care is to be taken to bring into discussion relevant points only. By doing so the reader gets a clear picture of the author's opinions. Sometimes it so happens that the full comprehension of the text needs some general background information. This may include original data, tables forming supporting evidences, etc. All such matters are given in the appendix. For example in the present handbook, a long discussion on the 'Origin of Indian Scripts' is added as Appendix-A to the chapter 8: 'Scripts used in Manuscripts'. For a proper historical perspective of how the various scripts areinterrelated, a general understanding of the origin of scripts is very much

needed. Similarly tableof 'Some Important Manuscript Collections is given as Appendix-B to the chapter 9: 'Writing atenals to support the antiquity of writing materials, etc. Each appendix should be clearly separated from the text and listed in the Tableof Contents'.

3.2. Bibliography: Bibliography is 'a list of source materials which have been consulted in the process of writing a book or paper (Webster's Dictionary). The information regarding the materials should be complete in all respects containing the name of the author title, and imprint. The edition mentioned in the bibliography should be identical with thatused in writing the text and notes. For the purpose of guiding the reader with further literature on the fringe areas, a few more entries may also be added. But no book which is cited in the thesis should be omitted in the bibliography.

There is a method of presenting the bibliographic citations. The author, the title and the imprint are treated as three distinct units and separated by full points. The author's name is reversed by putting the family name or the end part of the name as the initial word of the entry being followed by the Christian name or the other part of the name with a comma (e.g. Sharma, Mukunda Madhava for Mukunda Madhava Sharma). If the book is authored by more than one person, the name of the first author is to be reversed and the others are shown in their natural order. Some authorities opine that all the names are to be reversed for symmetry and consistency with the general format. After the author there should be a full point. The title of the book should be typed with underline and separated

from imprint by a full point. In case of articles in journals, the title of the article should be in single quotation marks and the name of the journal with underline. All the words in the title of the book or the article and journal maybe put in small letters without any distinction. This is because of the growing acceptability among scholars to reduce the use of capital letters to the minimum. Some scholars, however, continue to insist upon the traditional method of using capitals for the initial letters of all nouns and adjectives. The prepositions, conjunctions and pronouns are put in small letters (i.e. lower case). The imprint, consisting of the place of printing, name of the publisher, date and series, is treated as one sentence. In case of journals volume, part and page numbers are also given in the imprint; e.g.

Altekar, A.S. The Position of Women in Hindu Civilization, from prehistoric times to the present day. Delhi, Motilal Banarsidass,1983 (rpt. of 2nd ed. 1959).

The traditional works is Sanskrit are to be treated separately for convenience. The traditional writings are known better by their titles than by their authors. Thus these books should be listed alphabetically on the basis of their titles. Here the normal practice is that the sources are separated into traditional and modem. All the traditional sources are alphabetically entered text wise. The title of the work, author, editor, place of publication, publisher, year of publication are given in order. The title of the work and author aretreated as one unit; e.g.

Vakyapadiya of Bhartrhari with the Vrtti and the Paddhati of Vrsabhadeva. Ed. by K.A. Subramania Iyer. Kanda I. Poona, Deccan College, 1966, Deccan College Monograph series 32.

3.3. Index: The table of contents gives only broad outlines and the main headings of the subject. In order to draw cross references and also to give full details of the matters and materials used in different places the device of index is introduced in writing monographs and theses. Thus the index acts as a clearing-house of the information spread throughout the volume. The scope of the index depends upon the choice of the researcher as to how he designs to exhibit his work. One may limit to simple 'Name and Place Index' by giving the name of authors and places cited in the book. Another scholar may plan specialised indexes by giving subjects, subtopics, examples, quotations and so on. The index is an invariable aid in modern publications. When the thesis is presented in the form of a typescript it can be omitted at the option of the researcher.

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